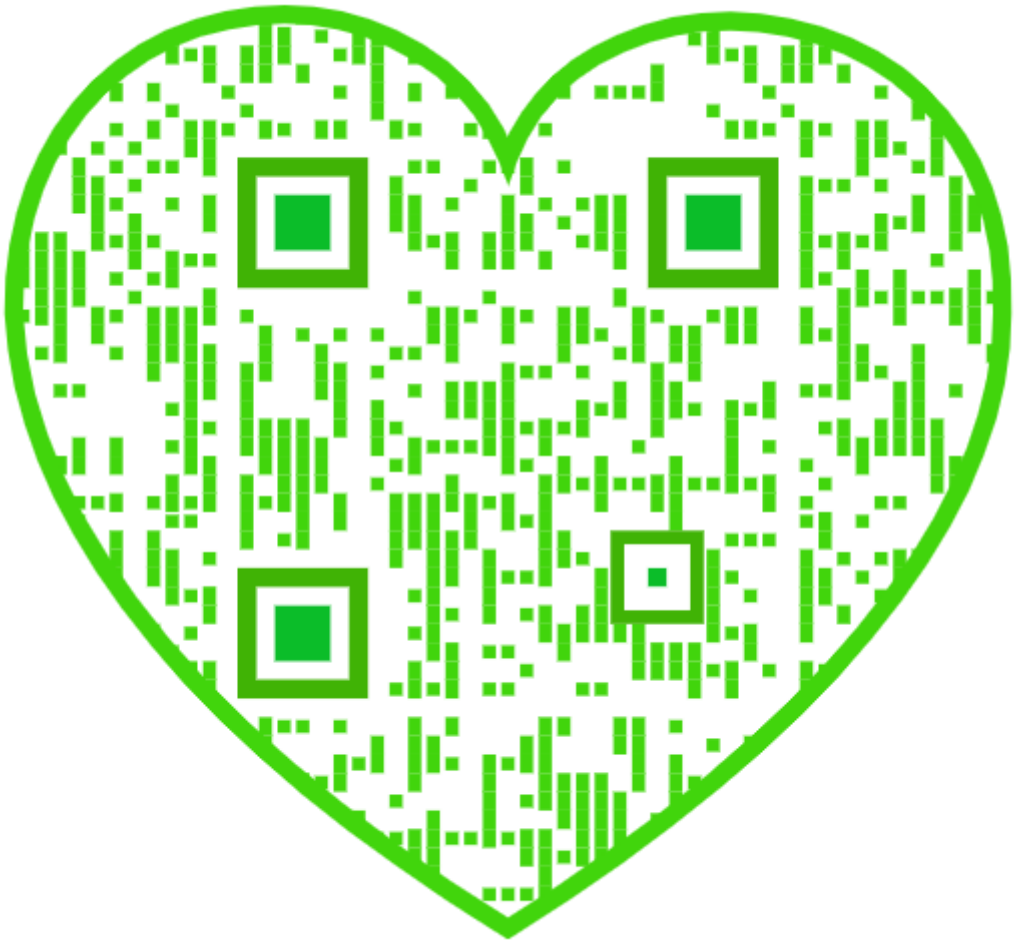
LIBRARY OF CONGRESS
00013778814



Class HB 171
.5
Book .E 49
1918

ELEMENTARY PRINCIPLES OF ECONOMICS

REVISED

THE MACMILLAN COMPANY
NEW YORK · BOSTON · CHICAGO · DALLAS
ATLANTA · SAN FRANCISCO

MACMILLAN & CO., LIMITED
LONDON · BOMBAY · CALCUTTA
MELBOURNE

THE MACMILLAN CO. OF CANADA, LTD.
TORONTO

ELEMENTARY PRINCIPLES OF ECONOMICS

TOGETHER WITH A SHORT SKETCH OF ECONOMIC HISTORY

REVISED

BY

RICHARD T. ELY, PH.D., LL.D.

PROFESSOR OF POLITICAL ECONOMY IN THE UNIVERSITY OF WISCONSIN

AND

GEORGE RAY WICKER, PH.D.

PROFESSOR OF ECONOMICS IN DARTMOUTH COLLEGE

New York

THE MACMILLAN COMPANY

LONDON: MACMILLAN & CO., LTD.

1918

All rights reserved

HB171
.S
.E4
1917

Copyright, 1904 and 1917,
By THE MACMILLAN COMPANY.

Set up and electrotyped. Published May, 1904. Reprinted November, 1904; July, 1905; September, 1906; January, July, September, 1907; January, 1908; July, 1909; February, June, 1910; February, July, 1911; July, 1912; April, November, 1913; January, June, 1914.

Revised edition, published June, 1917. Reprinted October, 1917.

By Transfer
D. C. Public Library
AUG 17 1934

Norwood Press
J. S. Cushing Co. — Berwick & Smith Co.
Norwood, Mass., U.S.A.

415121

DISTRICT OF COLUMBIA PROPERTY
TRANSFERRED FROM PUBLIC LIBRARY

PREFACE TO THE FIRST EDITION

In offering this textbook to teachers and students of economics, the authors feel that a brief word of explanation and suggestion may afford help in judging the quality of the book as well as in the use of the book, should favoring judgment result in its adoption for classroom work.

It has been the aim of the authors first of all to make the book teachable. In choice and rejection of substantive and illustrative material and in its arrangement; in the form of the chapters, paragraphs, sentences, and words; in all that can affect the ease or difficulty of conveying an understanding of economics to the beginner, this complicated quality of teachableness has been earnestly and constantly sought.

Fortunately for the welfare of the science of economics, there is more or less disagreement among economists as to many points of theory. But manifestly an elementary textbook on the subject is not a place in which conflicting views should be presented and discussed, even if space would permit. Nor have the authors wished to use the pages of the book for the propagation of views in which they might chance to differ with other economists. It has seemed best to regard constantly the purpose of the

book as a text, and hence to subordinate individual opinion to the general good of the student. Here, as in many another question of choice, Pope's rule may well apply : —

> "Be not the first by whom the new is tried,
> Nor yet the last to lay the old aside."

In the main, therefore, and so far as the authors have been able, they have presented the outlines of theory in the form in which they are to-day most generally accepted by economists, leaving for later and advanced study the conflicting assumptions and arguments and points of view of economists who may be paving the way for the most acceptable textbook of a coming decade.

An examination of the book will show that scattered passages, amounting in the aggregate to many pages, have been printed "solid," *i.e.* without the interlinear spaces regularly used. Such are the passages which, either from their greater difficulty or from their subsidiary character, may best be omitted by a teacher pressed for time. Moreover, for classes in which the time limits are too narrow to permit careful study of the whole text, it may be found expedient to omit Book IV, on Public Finance.

It is perhaps unnecessary to add the word of caution that the summaries and questions at the close of the chapters may easily become a hindrance rather than a help to real thought and study if the teacher permit himself or his class to fall into slavish reliance upon them. Like the references to collateral reading, the questions and summaries are to be used as starting points and guides to further study and discussion.

It has been the hope of the authors, moreover, that the material carefully elaborated in the appendixes may not only help to guide both teacher and class during the

period of the formal study of the book, but may also encourage and direct the student in the after days of his professional or business or political life.

RICHARD T. ELY,
GEORGE RAY WICKER.

HANOVER, N. H.,
1904.

PREFACE TO THE SECOND EDITION

The reception accorded this book in the thirteen years since its first publication, a reception which has gratified even more than it has surprised the authors, perhaps justifies a word of appreciative acknowledgment to the thousands of teachers who have contributed to its success. They may share the authors' gratification in knowing that a Japanese translation has found wide acceptance in the schools of Nippon; that the regular edition has been used in England, Canada, Australasia, and other English-speaking lands; and that more recently Mr. L. L. Price, the distinguished English economist, has revised the book, and, by utilizing more fully the national experience of the United Kingdom and employing English monetary terms and illustrations, has adapted it better to the schools of our British cousins. The authors in this revision have availed themselves in various places of improvements in style and substance made by Mr. Price, and gladly acknowledge their appreciation and their indebtedness to him.

So wide an acceptance has proved to the authors at once a challenge and a menace: a challenge to their best efforts in making the book better; a menace in the fear lest in some subtle way their best efforts at improvement might go astray. Bold caution seems to be the injunction laid upon them by the measure of their earlier success.

All descriptive and illustrative material has been very carefully recast, except in the few cases where it was evident that the older illustration was to be preferred. The theoretical treatment has been as carefully reconsidered. Wherever a simpler, clearer, better statement could be devised, the old has given place to the new. Wherever changes of theory have won their way into general acceptance within the last decade, there has been no hesitation or reluctance in adopting the change. Truth may be eternal, as Lowell wrote: —

> "but her effluence,
> With endless change, is fitted to the hour."

One limitation, seriously felt by the authors, they have not been able to break down or evade. Several lesser topics, vital, timely, and often closely related to the economics of our country, — such as immigration, the conservation of natural resources, and the economic position of women, — could find admission only by an impracticable enlargement of the book or by displacing other material which seemed to have at least equal claim to inclusion. Selection was demanded. Here critic and author should alike be bound.

The kind criticism of a host of students, teachers, and friends, and the particular, searching, and good-natured criticism of some thousands of the junior author's own students in Dartmouth College, the *corpus vile sed dilectum* of his experiments in teaching during sixteen college generations, should show its influence in this revision; we hope and confidently believe that such an influence will be traced. More particular acknowledgment is due to Professors F. H. Dixon and C. A. Phillips, and Mr. J. M. Shortliffe, of Dartmouth College,

who have brought their own experience in using the earlier text as their contribution to the common purpose of shaping a book that may best fit the needs of American students in school and college.

RICHARD T. ELY,
GEORGE RAY WICKER.

PREFATORY NOTE BY THE SENIOR AUTHOR

WHILE Professor Wicker and I have both worked hard and long on this book, going over it together word by word, discussing it at length point by point, I deem it only fair to say that the major portion of the toil has been his, that to him belongs the final literary form of nearly the whole work, and that to him is due chiefly the credit for whatever improvements in style and theory this edition shows over the first.

RICHARD T. ELY.

MADISON, WISCONSIN,
June, 1917.

CONTENTS

BOOK I

INTRODUCTORY

CHAPTER		PAGE
I.	Preliminary Remarks on the Nature of Economics	1
II.	The Principal Divisions of Economics . . .	5
III.	Fundamental Institutions in the Existing Socio-economic Order	8

BOOK II

A BRIEF SKETCH OF ECONOMIC HISTORY

I.	Introductory	21
II.	Early Stages of Industrial Development . .	28
III.	The Industrial Stage	43
IV.	The Industrial Stage in England	51
V.	The Industrial Stage in the United States . .	75

BOOK III

ECONOMIC THEORY

PART I

CONSUMPTION

I.	Introductory: Utilities and Goods	91
II.	The Law of Diminishing Utility	98

CHAPTER PAGE
III. Demand 104
IV. The Economy of Spending and Saving . . . 116

PART II

PRODUCTION

I. Introductory 126
II. The Factors of Production 136
III. The Organization of Production 155

PART III

TRANSFER OF GOODS
(Exchange)

I. Introductory 178
II. Value 183
III. Monopolies and Monopoly Value 204
IV. Money 225
V. Credit and Banking 244
VI. International Trade 262

PART IV

DISTRIBUTION

I. Introductory 291
II. Rent 296
III. Wages and the Labor Problem 312
IV. Interest 339
V. Profits 358
VI. Socialism 368

BOOK IV

PUBLIC FINANCE

CHAPTER PAGE
I. Expenditure and Revenue 384
II. Revenues in the United States 399

APPENDIX I

Subjects for Essays, Discussions, and Debates . . 419

APPENDIX II

Courses of Reading 426
Index 439

BOOK I

INTRODUCTORY

CHAPTER I

PRELIMINARY REMARKS ON THE NATURE OF ECONOMICS

ALTHOUGH the whole book which follows is but an expanded definition of economics, the student who is about to enter upon a study of the subject may well wish to have explained to him in advance, at least in rough outlines, what is the field into which he is about to enter. At the outset, therefore, let us attempt to frame some idea of the nature of the science and of the group of sciences with which it is most closely connected.

The Place of Economics among the Social Sciences. — First of all, economics is a social science. That is, it deals with man in his relation to society. But there are other social sciences besides that which we are about to study; among them history, political science, and sociology.

The question therefore naturally arises, How is our science distinguished from the others? To answer this question, we must consider more closely the different aspects under which society may be viewed. From the first, men in society have been busy in various lines of effort, which for convenience we may group as follows: language, art, education, religion,

family life, social life, — in the narrow sense of that term, — political life, and economic life. It is with the last of these eight spheres of human activity that our science has to deal. By the term "economic life" is meant, roughly speaking, that part of human activity which is devoted to getting a living.

A peculiar feature of these activities is that they are all *collective;* that is, they are activities which one man cannot well carry on alone. In the case of family and political life and some of the others this is at once obvious. Careful examination shows it to be true of them all. It is for this reason that the sciences which deal with them are called social sciences.

Preliminary Definition of Economics. — Economics, then, *is the science which treats of those social phenomena that are due to the wealth-getting and wealth-using activities of man.* It deals with all those facts about society that result from man's effort to get a living. The wealth-getting activity itself we call economic activity. The economic life, or the relations to which the economic activity gives rise, we may call by the simple word "*economy.*" With this understanding, we may say that economics is *the social science that deals with the economic life, or the economy, of man.*

The Economic Unit. — If we keep in mind this meaning of the term "economy," we shall see that there are economies of various sorts. Thus, the economy of the ancient Greek household, with its slaves and dependents, is different from that of the medieval city or of the modern nation. In this book we study the economy of the world or the nation as a unit, with individual, household, city, and state as subordinate economies.

The eight different human activities which have been enumerated cannot be entirely separated in thought any

more than they are actually separate in real life. Thus legislation, though it belongs primarily to the province of political science, has an intimate bearing on economic life. Again, industry in Russia is seriously hampered by the frequent recurrence of saints' days, which have therefore great economic importance; and even in Bavaria within a few years the number of saints' days was lessened by action of the state with the approval of the church; but saints' days have primarily to do with religion, not with economics. In the same way, economic life is dependent upon all the other groups of human activity.

Final Definition of Economics. — It is evident, then, that a complete definition of economics must be made broad enough to take note of this fact. We may sum up all these considerations in a final definition, as follows: *Economics is the science* (1) *which treats of those social phenomena that are due to the wealth-getting and wealth-using activities of man; and which* (2) *deals with all other phases of his life in so far as they affect his social activity in this respect.*

SUMMARY

1. Economics is a social science.
2. Each great department of social life has its appropriate science.
3. Economics is the branch of social science that deals with the phenomena to which the wealth-getting and wealth-using activities of men give rise.
4. Economics deals also with all the other social phenomena in so far as they affect economic activity.

QUESTIONS FOR RECITATION

1. Into what different groups may man's social activities be divided?
2. With which group does economics primarily deal? What concern has it with the others?
3. What have the different groups in common?
4. What is economics?

QUESTIONS FOR STUDY AND DISCUSSION

1. Name five of the most important public questions of to-day. What ones are primarily economic? Trace indirect economic relations of the others.
2. How large a part of our lives is concerned with matters that are essentially and directly economic?

LITERATURE

The teacher may find it advisable to supplement the text of this chapter with a discussion of the meaning of science and other broad and fundamental concepts. As a basis for such discussion, Karl Pearson's *Grammar of Science* is unexcelled.

CHAPTER II

THE PRINCIPAL DIVISIONS OF ECONOMICS

Economics is a science which covers so wide a field that it has been found desirable to divide it into parts, each of which is often treated by writers in separate works or in separate volumes of the same work. It may help the student to have outlined for him, in advance, the divisions as they will be presented in this work.

First of all, it has been thought best to present to the student in the opening chapter an idea of what the science is, and to show him, as is being done in the present chapter, what are the main topics with which the science is concerned. In another introductory chapter there is presented a discussion of some of the fundamental institutions in our social order.

In the second place, it is thought advisable to give in a few chapters a skeleton outline of the economic history of mankind, with more particular attention to those late developments in English and American economic history that have given rise to existing economic conditions. This part of the subject is often omitted from elementary textbooks, and therefore a word of explanation is here in place.

Few students undertake the systematic study of economics without having pursued courses in history; but the histories usually studied in schools are devoted in great part to other than economic considerations, and are written from another point of view than that which should be ours in our present study. It is of the utmost importance that the student

should approach the study of present economic conditions imbued with the historical spirit. As the chapters on economic history will show, social and economic institutions are not permanent, but constantly changing; and to understand aright what *is*, we must know whence it has developed, and, so far as we can, whither it is tending. Moreover, the study of economic history should show the student, as perhaps nothing else can, that great changes in the economic condition of a nation or a class do not come about in a moment at the command of an individual or of a great number of men organized in a state, though the will and the action of individual and state are powerful forces.

The way will thus be made clearer for that which is more commonly presented in textbooks under the name of economics or political economy. An analysis of economic phenomena at any time shows that these may be divided for purposes of clearer study into four main parts: first, those connected with man's consumption of goods, or, in other words, with the satisfaction of his wants; second, those connected with the production of goods; third, those connected with the exchange or transfer of goods among men; and fourth, those connected with the distribution of the income of society among the individuals, classes, and factors of production which coöperate to create that income. By dividing thus the general subject of economic theory, we are enabled to look at man's economic life from four points of view. The four divisions which we have indicated are usually treated under the following headings: *consumption, production, transfers or exchange,* and *distribution,* and we shall discuss them in that order.

Certain socio-economic problems of great present interest will, on account of their special importance, be treated at considerable length in those divisions of the general subject

to which they have a logical relation. Thus, under the head of transfers or exchange, we shall discuss the subjects of monopolies, bimetallism, and protective tariffs, and under the head of distribution, many of the practical problems concerning labor and wages.

Finally, the financial relations and operations of government, national, state, and local, are of a nature so important to the welfare of the citizen, and in some respects so peculiar, that it is thought well to treat them separately in chapters devoted to the subject of public finance.

SUMMARY

1. For convenience of treatment, economics is usually divided into several different fields of study.
2. The present book begins with an introduction explaining the nature and scope of the science.
3. A sketch of economic history is given to prepare the student for a better understanding of present conditions and problems.
4. Economic theory is presented under the four general headings: consumption, production, transfers (or exchange), and distribution.
5. A short presentation of the subject of public finance is added to give the student a more complete idea of the nature of economics.

QUESTIONS FOR RECITATION

1. What subjects are discussed in the introductory chapters of this book?
2. Why is it thought wise to include economic history?
3. What are the usual main divisions of economic theory? In what order are they given in this book?
4. What is the meaning of distribution as a division of economics?
5. Of what does public finance treat?

QUESTIONS FOR STUDY AND DISCUSSION

1. What are the relations of consumption and production?
2. In what sense is exchange a part of production? In what sense is distribution a part of exchange?
3. Name some of the chapter topics in this book which you think might properly have been placed in other connections.

CHAPTER III

FUNDAMENTAL INSTITUTIONS IN THE EXISTING SOCIO-ECONOMIC ORDER

In every civilized state to-day there are certain conditions under which men carry on their economic activities, so fundamental in their nature that we do not often stop to consider them. So deep-lying are they and so long established that we easily fall into the error of thinking of them as necessary to the very existence of society under all conceivable circumstances. Yet careful consideration will convince the student that this is far from the case. Let us, then, consider in detail some of the more important of these fundamental institutions in the existing order of economic society.

I. Property

By property we mean an exclusive right to control an economic good.

By private property we mean the exclusive right of a private person to control an economic good.

By public property we mean the exclusive right of a political unit (city, state, nation, etc.) to control an economic good.

A. Private Property

The right of private property is so fundamental in our modern civilization that we hardly think of it as resting on the will or consent of society, maintained only by constant

vigilance on the part of society, and subject even now to slow and gradual modification. Still less, perhaps, has it ever appeared to most of us as a right that is open to question. The reason for this attitude of mind is that people are ruled in great measure by custom rather than by the light of history and of reason. When any customary right has spread very widely and become deeply rooted in society, men fall into the error of calling it a " natural right." There is, to be sure, a sense in which the property right may be called natural, namely, that the right has been rather the result of a natural evolution than of any conscious convention. But, as usually employed, the term natural right implies that the right is " established by nature " and hence is not to be called in question. In reality there are no such rights. A man in isolation could obviously have no " rights " whatever. The word rights necessarily implies society, and points to the origin of rights not in any abstract nature, but in the grouping of men. All true rights are or should be rational — rights which can show good reason for their claims, and can justify their existence on the ground that they promote human welfare.

Yet it must be noted that the very fact of the long-continued existence of any social institution furnishes strong presumptive evidence that the institution has ministered to social welfare. Therefore, those who appeal to the law or to public opinion to overthrow or to abate the force of the institution have to bear the burden either of showing that social conditions have so changed as to destroy the beneficent operation of the institution, or of offering very strong evidence that some other institution would better subserve the end.

Beginning of the Right of Private Property. — On looking into the history of private property, we find in the first place

that, as a clear and distinct concept, it *has not always existed among men.* It is probable that the sense even of tribal ownership or property was a slowly developed product of civilization. The idea of private property was of still slower and later growth. The savage at first owned nothing. Doubtless, even in very early times, when the primitive man had caught or killed an animal, he considered it more or less his, though even in such cases it was the common property of his family or tribe rather than the exclusive property of the individual. From insignificant beginnings, especially from the possession of personal articles of clothing and adornment, the right or feeling of ownership has grown, *including more and more things and dividing the ownership more and more,* until at last nearly everything is owned and nearly everyone owns something. Not until a rather advanced stage of civilization had been reached did land become property, and even to-day the last forms of tribal ownership of land have not everywhere, even among civilized peoples, given place completely to individual property.

Strengthening of the Right. — In the second place, it is only in comparatively recent times that private ownership has been either so exclusive or so extensive as it is at present. It is not many centuries since a Scottish clan held the right to the territory it occupied so absolutely that no chieftain, however powerful, could abridge the right. To-day, there are tracts of country in Scotland almost stripped of their agricultural population, with game rather than men finding a living on these estates. Slowly, however, a reaction has set in, and most nations are now beginning to enforce and extend their public claims and are developing the social side of private property.

Limitations to the Right. — In the third place, we find that even to-day *private property has certain sharp limitations*

which indicate whence it springs and from what source it draws its being. Society, through the state, even now says to the individual citizen, "Thus far shalt thou go, and no farther." By its action it shows that it is the grantor of private rights, and that it may withdraw them whenever such a course will be to its advantage. Let us consider some of these limitations.

I. **Limitations to Private Property imposed by Society in its Own Behalf.** — 1. *Taxation.* — The first of these limitations exists in the taxation of private property, which from one point of view may be regarded as simply the taking by organized society for its own uses of a part of the value of what it has left to the private ownership of its citizens. Taxation, as understood to-day, is a comparatively recent activity of the state. During the Middle Ages the right of the state to take private property for its support was stoutly opposed, and there was a strong tendency to regard all taxation as extortion. To-day the right of taxation is almost universally conceded. Taxation is perhaps the most extreme limitation imposed upon the right of private property by society in its own behalf.

2. *Eminent Domain and Requisition.* — A second limitation exists in the right of organized society to appropriate to itself specific pieces of property with direct compensation to the private owner. This right is exercised especially in time of war, as when the nation for its military needs takes cattle for the subsistence of its troops or wagons for their transportation. Such an assumption of proprietorship is known as *requisition*. But in times of peace the government often takes for its own purposes, with due compensation, land or other property, under the exercise of what is known as the right of *eminent domain*, — words which in more common language simply mean ultimate ownership.

3. *Fines, Forfeits, and Escheats.* — Fines, imposed and collected by government, form a third clear limitation upon the absoluteness of private property. *A fine is a money payment exacted by the state as a penalty for some offense against the law. When, instead of money, other property of the offender is taken, the name forfeit is used. Escheat is the name applied to property which reverts to the state through the death of the former owner without a will and without heirs.* The word is also used to name the *form* of reversion in such cases.

II. Limitations directly in Behalf of Individuals. — The three limitations just described are such as society sets up directly in its own behalf. But there are still others, enforced by society not directly for itself but for individual citizens. (1) The first is *the exercise of the right of eminent domain in behalf of individuals or corporations.* If a regularly chartered railway company is unable to make terms directly with the owner of land over which it proposes to lay its tracks, it can secure possession by appealing to the government, which compels transfer of the property for compensation. It should be noticed, however, that in all such cases it is presumed that a superior public purpose is to be served by the company.

Moreover, there is a vast system of limitations upon the use, or rather the abuse, of private property, which are designed to prevent the individual from injuring himself or others. We need not enter into an extended description of these limitations. Generally speaking, (2) *no man may use private property to maintain a public nuisance.* As the Latin law phrase has it: *Sic utere tuo ut alienum non laedas; i.e. So use your property as not to injure another's.* Nothing is more fallacious than the idea that the right of ownership allows a person to do as he pleases with his prop-

erty. It is true that rights of private property have sometimes been so defined as to permit many abuses to go unpunished, but it has been the tendency of society so to limit the rights as to exclude abuses. Whenever any given right has proved generally unfavorable to the welfare of society, society has modified or abolished that right, or, failing to do so, has endangered its own stability. However, we must frankly recognize that, as law operates in accordance with general principles, many abuses exist that cannot be remedied by law. The problem is to prevent wrong use without impeding right and desirable use. If the student thinks seriously about this, he will discover many cases of a wrong use of property which at the same time cannot be corrected by any general rule. For if the attempt is made to form a general rule to prevent the particular abuses, it will be seen that the same rule would in many cases prevent a right use. It is within the spirit of the law to go as far as possible by general rule; as time goes on we learn how to prevent an increasing number of wrong uses of property. But after we have done our utmost, there will still remain a large field of wrong uses which can be corrected only by individual action or by associated efforts of a private sort.

B. Public Property

Public property, as defined above, refers to an exclusive control of some political authority and is a very different thing from free goods, because the laws of property, as for instance those regarding theft, apply quite as stringently to public as to private property, sometimes even more so. The sharpness of the law of public property in the post office is well known.

It is one of the defects of current discussions of property that the concept of public property has been treated inadequately by economists and publicists generally, with the result that false and one-sided conclusions have been drawn. Distribution depends on public as well as on private property, and the interrelations of these two are vital in any given distribution of wealth.

But it must be borne in mind that, strictly speaking, property refers to rights only. Property is an exclusive right. Speaking accurately, then, property is not a thing, but the rights which extend over a thing. A less strict use of the word property makes property include the things over which the right extends. We say of a farm, "This is my property," meaning the land and improvements on it and not merely the rights in them. But, strictly speaking, property is the right, and not the object over which the right extends.

II. Guaranteed Privileges

Closely connected with the general subject of property is the legal arrangement whereby exclusive privileges are awarded in return for services to society. Such privileges really become a special form of private property. Their particular importance is in determining the distribution of wealth, but they are not without importance also in the production of wealth, on account of the stimulus which the hope of such privileges may give to invention and improvement.

Chief among guaranteed privileges are *patents* and *copyrights*. Society, in all modern nations, grants *patents* to inventors of mechanical devices and *copyrights* to authors of literary or other artistic productions. Copyright is extended

not only to books, pamphlets, and the like, but also to marks or names designed to distinguish certain products in the market. Such *copyrighted trademarks* have been of great economic importance in recent years.

Most modern states proceed on the assumption that the public interest will be furthered by granting these exclusive privileges, and it is generally agreed that the policy has been justified by its results. Yet experience has shown that neither patents nor copyrights should be given without limitations. Patents should not be given on light and trivial grounds, nor for unlimited or overlong periods. Moreover, owners of patents should be made by law either to use them or to allow them to lapse, and to grant to others the right to use them on payment of a reasonable royalty. Similarly, copyrights are carefully guarded in the interests of the public. The law in a general way aims to give the reward of services to the author, and avoids allowing a reward for services which others have performed.

III. Contracts

Another fundamental institution in our present industrial society is contract. Contract, while logically a separate right from that of property, naturally flows from it, and is usually regarded as in reality an incident of property or one of the bundle of rights of which property in general consists. Thus property, in the absence of limitation, is assumed to include the right to contract for the use or sale of the thing owned. Some sort of contract lies at the basis of all associated action. That this condition of associated activity should be maintained by the state can hardly be doubted, yet even the right to contract has its limitations resting upon human well-being. To-day legislation provides (1)

who may and who may not contract, (2) for what purposes valid contracts may be made, and (3) under what forms and conditions they must be made to be valid. Experience justifies this regulation. Children, for example, cannot as a rule make contracts that will bind themselves, because they are not presumed by the law to have the requisite knowledge and judgment. Again, agreements which are clearly opposed to public policy, such as an agreement entered into for the commission of a crime, are invalid and would not be enforced by the courts.

IV. The Right to Establish Private Enterprises

The right to establish private enterprises is another fundamental one which is nevertheless changing and changeable. It is only within the last century that the right has come to have its present wide scope, especially in the case of corporations. Many restrictions indeed exist, as in the case of the liquor traffic; while in the field of the so-called public utilities, — railways, lighting works, etc., — restrictions have so increased recently that it is generally necessary to secure special authorization to establish a new enterprise. It is still open to serious question, however, whether society has not gone too far in our own country in the direction of granting freedom to establish private business.

V. Personal Liberty

Personal liberty or freedom, including (1) *the right to move from place to place* at pleasure, and (2) *the right of acquisition*, — that is, the right to acquire property, — is an institution which we are perhaps most likely to regard as necessary and natural under all circumstances. Yet here again we

have the case of a right which has been very slowly acquired by society. Moreover, it never has been, is not to-day, and probably never can be, an unlimited right. It is the endeavor of society to equalize human liberty, not to make such liberty absolute, for that would be impossible. The question, then, is not whether we shall limit liberty, but how we can so limit it that we may secure a maximum of liberty for all.

The Basis of Human Rights. — What, then, is the basis of human rights? The preceding discussion should have made it clear that rights do not come from nature in the sense that they thus gain a standing and authority independent of the will or consent of society. Neither are such rights *absolute* or *inherent*, though these words have often been mistakenly used in describing them. Private property, contract, personal liberty, and all the other " rights of man " must justify themselves by proving that they promote the highest welfare of mankind. As the Latin phrase has it, " *Salus publica suprema lex.*" Some of us may believe that it is in the " very nature of things " that personal liberty, for example, will best serve human welfare, but we cannot ask or expect others to take this for granted on our unsupported assertion. And when we admit that we must *prove* the social beneficence of private property or personal liberty, we have already practically abandoned the " natural rights " argument in the dogmatic form already described. Practically speaking, therefore, we may all agree that *the basis of human rights is social expediency, — the proved power to promote the well-being of men in society.*

The student must think this out fairly and deliberately. Only when he has substituted for bare dogmatism the rule of human welfare will he be prepared to study economic questions rationally and scientifically.

For the maintenance of these fundamental conditions of the existing social order which we have described, we are dependent upon the political organization of society, which we know as the state. No other instrument of society is adequate to the task. The maintenance of these foundations, if they are to be maintained at all, can be accomplished in no other way. When the state attempts this and little more, its policy is said to be passive. The French phrase, "laissez-faire," meaning "let alone" or "hands off", is most frequently used to characterize this purely passive policy. When the state goes far beyond this in endeavors to promote the general welfare, its policy is said to be active.

Conclusion. — Let us remember, then, that the most fundamental institutions are not unchangeable, but that we can discover their beginnings in history, and can trace their development through manifold and unceasing changes to their present form. Let us remember, too, that as change has marked the past, so it must mark the future; and that the institutions which we have described, fundamental as they are, derive their rational justification from their power to promote human well-being. Bearing these facts in mind, we may free ourselves from two errors, each an extreme one, from which many false views of our future take their rise. On the one hand, we may hope to escape the pessimism that springs from looking at the existing order of things as unalterably determined; and, on the other hand, we may escape that unreasoning and unreasonable optimism which belittles the importance of our fundamental rights and institutions, and which inconsiderately hopes to change these, in the twinkling of an eye, by the simple expedient of a royal edict or a majority vote of a sovereign people.

SUMMARY

1. There are certain ideas and institutions in our social order which are so fundamental that we come to regard them as "natural" and necessary.
2. Among these fundamentals are property, — public and private, — guaranteed privileges, contract, the right to establish business enterprises, and personal freedom.
3. Far from being absolute or natural and necessary to every state of society, these rights have always been limited, have always been changing, and have their origin and justification in social expediency.
4. History warns us neither to overestimate nor to underestimate the importance of these institutions. They may be changed, but they cannot be changed easily or quickly.

QUESTIONS FOR RECITATION

1. What is private property? Why is it often held to be a right that is not open to question or discussion?
2. What is the basis of human rights? Are any of them exempt from the need of examination or justification?
3. What is the historical origin of private property?
4. What limitations does the state set to private property? Is the present tendency toward an increase or a decrease of these limitations?
5. Ought private property to be retained? If so, why and how far?
6. What is a trade-mark? A copyright? A patent? Discuss their purpose and results.
7. What limitations are properly set to the right of personal freedom? Of what does the right to personal freedom consist?
8. From what two extreme errors ought a true idea of fundamental institutions to guard us?

QUESTIONS FOR STUDY AND DISCUSSION

1. Has a murderer a "right to live"? If so, is it a "natural right"?
2. Is it the argument of natural right or of social expediency that has led many societies to give up the death penalty?
3. On what basis would you argue against slavery in the United States to-day?
4. A corporation exists only by virtue of a charter granted by society. Has a corporation a natural right to hold property? to make contracts?

5. If human rights were natural, could they logically be limited? Could their just limits be discovered from nature?
6. Does the line between public property and private property change according to any general principle or law?

LITERATURE

Ely, R. T.: *Property and Contract*, especially Bk. I, Pt. I, Chs. 1–3.
Mill, John Stuart: *Principles of Political Economy*, Bk. II, Ch. 1, § 2, and Ch. 2, §§ 1, 5, 6, and 7.
Report of the United States Commissioner of Patents for 1888. (See also others of the Patent Commissioners' Annual Reports.)
Ritchie, D. J.: *Natural Rights*.

BOOK II

A BRIEF SKETCH OF ECONOMIC HISTORY

CHAPTER I

INTRODUCTORY

What Economic History is. — In beginning the study of economic history it will be well for us to recall what has been said in a preceding chapter as to the nature of the subject which is before us. The history of literature, the history of government, the history of religion, and other histories which the student can readily call to mind, have one thing in common: they are all of them histories of man. Each of them treats of man in one particular line of his activities. It is the same with economic history. Its subject is man, but it deals primarily, not with his government or his worship, but with his efforts to get a living. Many who have held a narrow view of our subject have objected sneeringly that it is but a "bread and butter" science. Even if this were a just view of the subject, economics would still be worthy of our most careful study. But, as a matter of fact, it means much more than bread and butter. It is plain on a moment's reflection that every kind of activity, however sublime, depends to some extent upon material things. And so this subject of ours — man in his effort to acquire and to use material things, to satisfy his wants, or, in other

words, to get a living — is of interest to everybody, and is closely connected with every kind of human effort.

General Survey. — At the beginning of our review of the history of man's economic efforts we are struck by the fact that all the manifold ways of getting things may after all be reduced to two: man must either *find* or *make*. Of course the two ways often combine in varying proportions, and in our own experience the two are constantly shading into each other; but for purposes of present clearness we may well make the distinction. Now, uncivilized man *finds* the things he uses; civilized man adds to *finding* the art of *making*. Indeed, *civilization, on its material side, consists largely in wanting many things and in learning how to make and to use them.*

The economic activity of man before the dawn of recorded history is enshrouded in so much of mystery that we can do little more than conjecture regarding it. We have evidence to show that prehistoric man obtained his material goods, as the beasts do, simply by taking possession of natural products, exercising little or no control over nature, and protecting himself from the elements only by caves or by the simplest of contrivances.

Historical Stages. — The period of civilization just mentioned is something so remote, something about which our knowledge is so uncertain and fragmentary, that we are scarcely able to treat it as a separate stage in economic evolution at all. We may, therefore, pass directly to a study of the regular stages, as they have commonly been described and distinguished, beginning with the time when men *had learned to kindle fires, to eat meat, and to live in some kind of political communities, however imperfect.* Starting thus, we may conveniently divide the course of man's economic development — regarding it from the point of view of his means of procuring goods — into five stages, as follows: —

(1) The hunting and fishing stage.
(2) The pastoral or nomadic stage.
(3) The agricultural stage.
(4) The handicraft, or trades and commerce stage.
(5) The industrial stage.

From the point of view of the changing size of the dominating economic unit, man's history falls into these four stages: —

(1) The stage of independent economy.
(2) The stage of town or local economy.
(3) The stage of national economy.
(4) The stage of imperial or even world economy.

Again, looking at the same development from the point of view of man's ways of exchanging goods, we may similarly distinguish the four following stages: —

(1) The stage of mutual giving of gifts.
(2) The stage of " truck " or barter economy.
(3) The stage of money economy.
(4) The stage of credit economy.

Still again, if we view economic evolution from the point of view of labor, we have the six following stages: —

(1) Slaughter of enemies taken in battle, — no steady, regular labor.
(2) Slavery.
(3) Serfdom.
(4) " Free " labor, governed largely by custom in the making of contracts.
(5) " Free " labor, with individual contract.

(6) "Free" labor, with collective bargaining and group contract regulated increasingly by statute.

These classifications may now be brought together in a single table, in which the historical relation of the various classifications is roughly indicated by the position of the stages in the parallel columns.

ECONOMIC STAGES

From the Point of View of Production.	From the Point of View of the Size of the Economy.	From the Point of View of Exchange.	From the Point of View of Labor.
1. Hunting and Fishing	1. Independent Economy	1. Mutual Gifts	1. Slaughter of Enemies in War
		2. Barter or "Truck"	
2. Pastoral or Nomadic			2. Slavery
3. Agricultural	2. Town or Local Economy	3. Money	3. Serfdom
4. Handicraft or Trades and Commerce			4. "Free" labor, customary contract
	3. National Economy		5. "Free" labor, individual contract
5. Industrial	4. Imperial or World Economy	4. Credit	6. "Free" labor, group contract

It must not be understood that these stages are in any of the classifications distinctly or sharply separated, that we can fix definite dates at which men consciously abandoned one way of obtaining goods, or of exchanging them, and passed to another method. The transition from one stage to another is slow and almost imperceptible. Those students

of this book who have studied botany or zoölogy will understand the illustration when we say that the stages shade into one another as do the varieties of closely related genera in the case of living organisms. Moreover, it must not be understood that all of the features of an earlier stage pass away when men enter into the newer way. In many cases all the features of the old survive and even have an increased importance in the later stage. Thus trades and commerce are to-day pursued on a far larger scale than they were in the handicraft stage itself; but since then new and important features of economic life have developed to give a new character to the age, and we seek to indicate this change by some distinctive title. To-day, in the United States, we can find illustrations of nearly all the stages of evolution that have been mentioned. Barter, or truck, is still the commonest mode of exchange in some parts of the country, and, indeed, there are comparatively few places in which credit transactions have in the main taken the place of money transactions. It is interesting to observe that, owing to the progressive western movement of the population of the country, the stages in the history of man's productive efforts appear in regular order from west to east. Thus certain parts of the western country are still largely occupied by hunters and trappers; next are great stretches of country almost entirely devoted to grazing; farther east, agriculture predominates; trades and commerce are active especially in the country east of the Mississippi and in the extreme west; manufacture on a large scale is found especially in the North Atlantic and North Central groups of States; while, finally, the great industrial combinations that mark the latest step in development are mainly confined, at least as far as their legal residence is concerned, to the Atlantic seaboard. It is perhaps excess of caution to remind the reader that the

American trapper, cattle man, farmer, and handicraftsman all find their life greatly modified by their easy and cheap intercourse with one another and by their access to the results of man's latest industrial achievements in other parts of the world. But on the other hand it is interesting to note that certain features of their life are reminiscent of the earlier unmodified stages.

Our study of the history of man's economic development may conveniently take the form of a study of the various stages which have been mentioned, and more especially of the stages in the history of man's productive efforts.

SUMMARY

1. Economic history is the history of man in his efforts to get a living; that is, to get the things needed for all his activities of body and mind.
2. Uncivilized man finds things; civilized man makes them.
3. The history of man from the point of view of his productive efforts may be divided into five stages: the hunting and fishing stage, the pastoral or nomadic, the agricultural, the handicraft or trades and commerce, and the industrial.
4. Other subsidiary classifications are based upon the history of the development of the size of the economic unit, the history of exchange, and the history of labor.

QUESTIONS FOR RECITATION

1. What is included in the term "living"? Mention some economic elements in religious work. In education. In politics.
2. What two fundamental ways are there of getting things? In which way can society get more?
3. What do we know of the economic life of prehistoric man?
4. What are the five stages of economic progress from the point of view of production? The four stages from the point of view of transfers? The six stages from the point of view of labor? The four stages from the point of view of the size of the economic unit?
5. What can you say of the distinctness of separation of these stages?

QUESTIONS FOR STUDY AND DISCUSSION

1. What do you think is the significance of the history of man's modes of getting a living as compared with the history of his forms of government?
2. Which do you think has had the greater influence upon the other?
3. Can you imagine an economic setting in which the American people could not have been brought to believe that human slavery was wrong?
4. Did economic forces play any part in deciding the fundamental issue in the Civil War?
5. What is the meaning of the phrase "the economic interpretation of history"?

LITERATURE

Bücher, Carl: *Industrial Evolution* (translated from the German), especially Chs. I and II.

Ely, R. T.: *Studies in the Evolution of Industrial Society*, Pt. I, Ch. III.

Lubbock, Sir John: *Prehistoric Times*, especially the last chapter; also *Origin of Civilization* and *Primitive Condition of Man.*

Morgan, L. H.: *Ancient Society*, Pt. I, Chs. II and III.

Schmoller, Gustav: *The Mercantile System*, in Ashley's Economic Classics, pp. 1–5.

Semple, E. C.: *Influence of Geographic Environment*, Ch. I.

Stanley, H. M.: *In Darkest Africa*, Vol. I, Ch. VIII; Vol. II, Chs. XXIII and XXXIII.

CHAPTER II

EARLY STAGES OF INDUSTRIAL DEVELOPMENT

I. The Hunting and Fishing Stage

General Characterization. — In the first stage of man's economic development, nature is the great factor in production. There is little labor and less capital. Labor, as we know it to-day, is beneath the dignity of the savage, and was therefore assigned largely to the women. Man contents himself with what nature gives him, his labor taking the form of appropriating these gifts. He has not progressed far in subjecting animals to his will; still less does he attempt to improve useful animals by breeding. Transforming natural products by his handicraft is but an insignificant part of his activity. Not even does he store up goods in time of abundance against a future time of dearth. The American Indian, where he has not been elevated by contact with a higher civilization, is a good illustration of this stage of economic progress.

Economic activity in this stage is in a high degree *isolated.* Hence the hunting and fishing stage, together with the two succeeding stages, is said to belong to the period of *independent economy.* In other words, the work of getting goods is not carried on, as with us, by great groups of men, in many countries, who exchange their products, but is done mainly in the single family, each family producing all or nearly all of the things which its members consume. For this reason,

too, there is little exchange or transfer of goods, though there is no unwillingness to make exchanges if opportunity offers to secure by exchange something new and attractive.

There being little exchange of products or division of labor, it follows that there are no economic classes and no industrial conflicts. The greater part of property, including all land, is the common possession of the social group, private property being confined to arms of war, household goods, and the immediate rewards of labor.

Hunting Tribes. — Although we have grouped the hunting and fishing tribes together as being upon the same plane of economic evolution, we can find certain clear differences between those who live primarily on the products of the chase and those who get their living mainly by fishing. Among hunting tribes we find the work and life leading to a high development of such qualities as cunning, endurance, and bodily strength, but not to a development of technical skill nor to reflection upon the processes of nature. Their condition of life prevents the possibility of any but a sparse population. It has been estimated that in this stage each hunter requires for his support more than fifty thousand acres, or seventy-eight square miles, an area which in the state of Rhode Island at present supports on an average more than forty thousand people. The great world city of London has a population almost three million times as dense. It follows from this need of large territories that war becomes an economic necessity whenever there is not an abundance of unoccupied land. This same condition of things gives us one of the causes of cannibalism. The pressure of increasing numbers bringing the people continually to the verge of starvation, they fall little by little into the custom of eating enemies taken in war.

Fishing Tribes. — As might be expected, primitive tribes

of fishing people are more peaceable than are the hunting tribes. Their population is denser, both because of their more peaceable disposition and because of the fact that a smaller area is sufficient for the support of a given number of people engaged as they are. Having less need of frequent migrations to seek new food resources, they naturally form larger accumulations of capital. They build dwellings of a more permanent character, and construct boats and fishing implements. On the whole, we may say that *the power of man over nature is greater among fishing than among hunting tribes.* Primitive fishing tribes can now be found only in the frigid zone.

II. The Pastoral Stage

General Characterization. — Between uncivilized man, who uses what he *finds*, and civilized man, who *makes* what he wants, there is a middle ground. The man of this middle period neither depends alone on what he can find, nor makes things to any great extent, as we commonly think of making things; but rather *raises* things; in other words, he has learned to a limited extent to give direction to the forces of nature. He has learned to produce, but he still lives chiefly on the raw materials he has coaxed from nature, not knowing how to make them up. He is learning to labor and to save. To be sure, he very early learns the art of making a few simple tools like bows and arrows and primitive stone implements; but with these few exceptions, it is worthy of note that as man learns to subdue nature he begins not with dead nature, — not with inanimate things, — but with living or animate nature; he uses, not metals, but animals and plants, and learns to increase their amount by artifice. Moreover, of these two classes of living things, he first subdues the higher

form of life, — that which more nearly resembles his own, — and, as a general rule, not until long afterward does he learn to exercise any considerable control over plant life for his uses.

Changes that mark the Stage. — When hunting tribes cease to depend for food solely upon the killing or capture of animals, and acquire the art of taming and breeding them, such tribes are entering upon the second great era of economic progress, which we have called the pastoral stage. Even in the hunting stage there lay the beginnings of such progress, in the taming of dogs and horses for hunting; but when extensive pasturing of animals for food and clothing takes place, the pastoral stage has well begun. Marked features of the earlier stage still continue, however. Thus, while man now lives chiefly upon his flocks, he still leaves the flocks to live upon what they can *find*. So, while man no longer needs to wander in search of his own food, he must nevertheless do so for the food of his flocks. Cities are therefore still impossible. Moreover, though the land will now support many more inhabitants than before, much land is still needed for the necessary pasture, and tribes and families roaming broadly in search of desirable situations frequently come into sharp collision. According to the calculations of the celebrated geographer, Professor Ratzel, nomadic populations require, on an average, about a square mile for every two to five persons. Wars, therefore, continue, keeping down population, but with one important change: the victims of war for a long time continue to be generally slaughtered, the women and children being more frequently spared than the men; but men who have flocks to furnish them food cease at length to eat human flesh. Captives later come to be recognized as of use in serving their captors, and thus slavery succeeds cannibalism and slaughter. Slavery could not

have become extensive in the earlier stage, because slaves without weapons would have been of little use when women did nearly all the drudgery, and, on the other hand, slaves with weapons would have been a constant menace to their masters.

Migrations. — Wanderings of whole peoples were very common, due in some cases to the exhaustion of old feeding-grounds, and in other cases to the natural increase in numbers when a tribe had been long established in one place. It was such overpopulation that brought about the warlike incursions of barbarian hosts into Europe from the heart of Asia, and the wanderings of the nations in the early centuries of the Christian era.

Little Land Ownership. — It follows from what we have already said that there was little ownership of land in the sense in which we now regard ownership. Tribes as a whole would lay claim to certain districts for a time, and would try to keep other tribes from pasturing there. But individuals of the tribe would own no land, or at most very little. The notion of land ownership develops only when the land itself becomes more useful, and when the fruits of its fertility can be more directly appropriated than could happen when land was used for pasturing.

Private Property. — Yet private property in other things than land had now become not uncommon. Even considerable accumulations of wealth took place, consisting of flocks, gold, silver, finely woven fabrics, and precious stones, — in short, such things as very early appeal to the barbarian taste for showy ornament and can be transported from place to place with relative ease. We also find, even at this early time, great differences in the wealth of individuals, the rich and the poor being sharply contrasted.

Little Commerce. — In spite of the growth of wealth among

men, there was little exchange or commerce. The reason for this is not far to seek. In order to have commerce, not only must there be wealth, but the wealth must be diversified. There is little to be gained by exchanging ox for ox. Of course, in the other classes of goods to which we have referred there was some little traffic, but trade in the modern sense of the word can hardly be said to have existed. The economy of each large family or household was in the main sufficient unto itself.

The Origin of Exchange. — Such trade as did obtain was carried on by barter, or by the still earlier form of exchanging gifts. It is an interesting fact that barter, the earliest form of regular exchange, grew originally out of the practice of making presents. Among many primitive peoples to-day, barter is not recognized as an institution, but when one person presents a gift to another, he waits expectantly for a gift in return, and when he receives it, scans it closely to make sure that he has got an equivalent for his generosity.

III. The Agricultural Stage

General Characterization. — Man's next accomplishment, which carries him a distinct stage farther in his development, is of immense importance. Already knowing how to manage animals to advantage, he now learns to "manage" plants, and to raise them at will. Agriculture, as a means of support, is thus added to the keeping of flocks and to the chase. A greater variety of food is in this way made possible for man, who now ceases his wandering life. A much denser population is the result. Professor Ratzel's calculations indicate that the early agricultural populations were about six times as dense as the pastoral populations. With a denser population remaining permanently in fixed abodes,

new relations spring up among men, new duties, new arts, and new possibilities of civilization. It is in these conditions that the political whole which we know as a nation has its beginning.

Land Ownership. — With growing density of population and increasing permanency of settlement goes a third result, — the private ownership of land. Successful cultivation of the soil requires detailed personal care and attention, and some sort of division of the land was hence seen to be necessary.

The Origin of a Laboring Class. — Perhaps the most important result of the change which produced the agricultural stage was the growth of slavery as an institution. As we have said, slavery had its beginnings in the preceding period, but it is only in the agricultural stage that it becomes an important, almost a fundamental, economic institution. Tending the herds did not call for persistent labor, but the process of tilling the soil is undisguised work, and primitive men were not fond of work, nor had they been trained by long usage to submit to it as to an unpleasant habit. It is not strange, then, that they should have spared the lives of men conquered in battle with the design of putting upon them the task of tilling the soil. This seems to us perhaps a poor reason for being humane, but where humanity is the result, a poor reason is better than none. Free labor has become possible only because for century after century certain men labored not from choice but from necessity. As they became free, labor became free, and the habit of labor has become fixed in the race.

Commerce. — With every increase of wealth the tendency to trade also increases, but as yet the occasion for trade was slight, since men's wants and wealth were still everywhere much the same. Such trade as existed ministered chiefly

to the love of luxury, and this long continued to be the case. It was probably in part from this cause that the ancient philosophers and the early fathers of the Christian Church displayed great hostility to commerce.

Laws and Customs reflecting Ideas. — There remains to be noted the change and enlargement in men's ideas, as reflected in their laws and customs. The Mosaic code, framed to govern a people in the pastoral and agricultural stages, furnishes perhaps the best source of information on these new ideas. Even before this time there had been numerous customs regulating life, but in the Mosaic code we are struck by the great increase of duties and restrictions which were then recognized. With fixed residence had arisen the state, with its justice, its guidance, and its protection, — its many *thou shalts* and *thou shalt nots;* and all this because men had now come to be permanent neighbors, and therefore had the utmost need of a definite understanding to keep them from trespassing voluntarily and *involuntarily* on one another's liberty. If men are to live close together and accumulate property and enjoy it in peace, there must always be general agreement among the many, and vigorous compulsion for the few.

"Neighbor" and "Stranger." — It is worthy of notice, however, that for a long time duties and laws were chiefly recognized as being applicable only at home. Beyond the boundaries of the tribe or nation they were scarcely held to be binding at all. Thus, for instance, in the early Germanic communities, when the scattered tribes were still small and separated by unoccupied land, the members of each tribe lived in relations of brotherhood, holding property in common and closely guarding all mutual rights. But when different tribes came together to trade on the neutral ground separating their settlements, all kinds of sharp practice were

deemed admissible. Things not to be thought of at home here passed unquestioned.

Duration of the Agricultural Stage. — The agricultural stage lasted for centuries among many peoples. In the development of the civilization of Western Europe, it did not evolve into a higher form until the great movement toward the building of cities began. Of course it has not been wholly displaced by subsequent stages of economic life, but only modified — unceasingly modified — with the lapse of time. The marks of the earlier stage are clearly discernible even in our industrial life in America.

IV. The Handicraft Stage

General Characterization. — We have said on an earlier page that real material civilization begins with *making* things; it is with the stages in which men make things that we have now to deal. Speaking very generally, we may say that men make things in either of two ways: by the hands *directly*, sometimes assisted by simple *tools;* or by the hands *indirectly*, through the mediation of *machinery*, generally propelled by other than man's power. As was natural, man in his progress came first to make things with his hands directly, learning later to quicken and improve his work by the use of machinery and the employment of power produced by animals, or running water, or wind, or steam, or electricity, or gas explosion. The very word "manufacture," which we use to represent the idea of *making things*, meant, until the nineteenth century, *making things by hand*, as the Latin words from which it is formed indicate. As the word has since had an extension of meaning, we may say that there are two kinds of manufacture: (1) hand manufacture, and (2) power manufacture. Hand manufacture is the foundation of the fourth stage.

It goes without saying that labor and capital — the fruit of past labor used for increasing the product of the labor of the day — now become more important than ever before. Man by his skill transforms raw materials: he learns to weave fabrics and to fashion things in wood and metal; to use inanimate, as well as animate, nature. The chief results of this will be more clearly seen as we discuss them under separate headings.

1. *Trades.* — Skill in doing comes from repeated doing. "The Jack of all trades is master of none." With the coming of handicrafts, therefore, self-interest leads men to specialize so far as the needs and circumstances of the time will permit them to act thus with profit. Hence, in this stage, we find division of occupations, whereby some men become blacksmiths, some shoemakers, some weavers, etc. Many surnames, such as Smith, Baker, Joyner, Taylor, point back to a time when such specialization was more noticed than at present.

2. *Commerce.* — We have more than once mentioned the fact that there can be little commerce so long as men are generally engaged in the same kind of business. But when communities become larger; when their wants grow more various and their goods consequently increase in quantity and diversity; when, finally, it becomes possible for men to specialize in their occupations, commerce becomes widespread and important. When each man has his trade and makes articles of only one kind, he will neither want all the things that he makes, nor make all the things that he wants. He must make exchanges. And so, whenever manufacture develops, we find trade growing up as a necessity. We cannot say that manufacture results in commerce, nor that commerce results in manufacture. We must rather look upon the two as mutually causing each other, their joint

cause lying in the growing culture and wants of mankind. This stage, on account of the appearance of commerce, is frequently designated as the trades and commerce stage, but it may also be designated more simply as the handicraft stage, inasmuch as it is dominated by handicrafts, while commerce has in this stage far less significance than in modern times.

With the growth of commerce, some men find it profitable to spend all their time in exchanging the goods that other men make, earning their compensation by saving the makers the greater time and trouble which direct exchanges would necessarily involve. Moreover, different countries also find an advantage in exchanging their respective products, and here again men of special training are needed to carry on the work of exchange. Such commerce as grows up during this stage between different countries or communities is much handicapped by the inadequate means of communication; but where goods can be carried by water, commerce, even in bulky commodities, takes on considerable proportions.

3. *Money.* — Of course, for such a general system of exchange, barter was entirely inadequate. Among primitive peoples barter is the only mode of effecting exchanges, and travelers among savage tribes tell amusing stories of the difficulties experienced in securing goods by such a system. We cannot here enter into a full discussion of the limitations of barter, but we may speak of one of the chief requisites for any exchange by barter, — the need of what one writer has called *reciprocity of desire.* By this expression it is meant that before an exchange can take place by barter, the man who has a superfluity of one good and wants another must find a second person whose superfluity and want are reciprocal to his own. The rarity of such coincidence is itself sufficient to prevent barter from serving as an efficient method of exchange. In the course of time, as men bartered

with one another, it was found that certain things were more generally acceptable than others, and that some one thing or some few things were most generally acceptable. These generally acceptable goods have varied in different stages of economic development and in different places. Among primitive peoples, articles of adornment have usually held such a place. As people grew to learn that such articles were generally acceptable, they would themselves in turn receive them more and more readily in their exchanges, and the frequency of use would in turn increase the recognized utility of possessing them. Without going further with our explanation, we may say that, *spontaneously and in large part by unconscious processes, there has always grown up among every people some one generally accepted and recognized medium of exchange or some few things that have been so recognized. As this medium grew in acceptability and cognizability, it took on more and more the character of what we know as money.* It was during the handicraft or trades and commerce stage that gold and silver, already much used for this purpose, came to have that universal recognition for their desirability in exchanges that made them money.

4. *Cities.* — Among those employed in agricultural pursuits, there is a tendency to form village communities, but in the agricultural stage such communities cannot become populous, because agriculture requires a scattered population. Manufacture, on the other hand, has an opposite tendency. If men are to live by their trades and by exchanging with one another, it is important that they be near one another. Thus cities, situated conveniently for commerce on the coast or on great rivers, develop whenever men learn to manufacture.

5. *The Gild System.* — New forces coming into society do not take care of themselves. So the trades had to organize

in order to reduce their business to some kind of order. Each trade had its gild, which specified in detail how the business should be carried on, how many should be admitted to it, and how the trade should be learned. Where, as was usual, the gilds controlled the government of the cities, these rules were also sanctioned by law.

6. *Political Freedom.* — Throughout most of Europe the agricultural stage culminated in the feudal system. Under that system the feudal lord occupied a commanding position, very like that held by a patriarch in an earlier pastoral state, and owned the land occupied by the tribe or people. The tillers of the soil had become serfs, who, though they could not be sold away from the land, were obliged to stay on the lord's domain and work for him for such reward as he chose to give them, or such as custom and public opinion, powerfully backed up by the Church, had established. Slavery thus gave way to serfdom. The trading cities sometimes became opponents of the great feudal estates. The lords, feeling their power threatened, sometimes opposed the cities. And so there were quarrels and agreements in places. Finally the cities conquered and won charters for themselves. These cities were then free cities, and serfs who fled to them were accepted and made free. Thus feudalism began to break down in the towns at least, and with the disappearance of slavery and serfdom, man's progress in the art of getting a living resulted in another great step toward liberty and humanity.

SUMMARY

1. Uncivilized or savage man gets his living by finding things, *i.e.* by hunting or fishing, or by both.
2. Economic activity in the earliest stage is largely isolated.
3. Hunting tribes differ in character from fishing tribes, owing to the difference in the conditions of their life.

4. The domestication of animals, leading to the pastoral stage, assures subsistence, introduces slavery, and increases wealth.
5. The pastoral stage, in which men get their living by "raising" or "managing" animals, has little landownership or commerce, and is marked by frequent tribal migrations.
6. In the agricultural stage, man adds the "management" of plant life to his earlier management of animal life, thus making his existence more secure and population more dense.
7. Cultivation of the soil fixes residence, extends law and custom, and develops tribal ownership of land and a distinct laboring class.
8. Economic civilization, which begins with the *making* of things, appears in the handicraft stage, called also the trades and commerce stage.
9. In the handicraft stage, money is regularly used, trades are developed and organized in gilds, and cities, rising from the new commerce, become free and break down the feudal system.

QUESTIONS FOR RECITATION

1. What is the economic mark of savagery? How do hunting and fishing tribes differ? Why?
2. What is the economic mark of semi-civilization? What stages have this as their special character?
3. What other economic changes from the earlier stage are found in the pastoral stage?
4. What is the fundamental difference between the agricultural stage and the pastoral? What economic results flow from this difference?
5. What is the economic mark of civilization? What stages have this special character?
6. What is the relation between trades and commerce?
7. What great economic institutions grew out of trades and commerce?

QUESTIONS FOR STUDY AND DISCUSSION

1. How did man acquire the art of domesticating animals? of controlling plant life?
2. Has free labor an economic advantage over slavery? Has it always had such an advantage?
3. Has free labor a moral superiority over slavery? Has it always had such superiority?

4. If history discloses the fact that economic changes have brought about changes in men's ideas of right and wrong, are further changes of the same sort to be expected?

LITERATURE

See references at close of preceding chapter. Also:

Ashley, W. J.: *Introduction to English Economic History and Theory*, Ch. I, § 6.
Bücher, C.: *Industrial Evolution*, p. 154.
Cunningham, W.: *The Growth of English Industry and Commerce*, Ch. IV, § 114.
Ely, R. T.: *Studies in the Evolution of Industrial Society*, Chs. III to V.
Gamble, F. W.: *The Animal World*.
Genesis, Ch. XIII.
Maine, Sir Henry: *Early Law and Custom*, Ch. VIII.
Rogers, J. E. Thorold: *Work and Wages*, Ch. III, pp. 55–66.
Scott, D. H.: *The Evolution of Plants*.

CHAPTER III

THE INDUSTRIAL STAGE

We come now to the last of the stages in man's economic development. Inasmuch as this last stage is the one in which we are living, it will be well to give to it a more detailed study than has been given to the preceding stages. After a general description of the characteristic differences between the industrial stage and the stage which preceded it, we shall pass on to study the history of the great movement by which the industrial stage was ushered in. As it was in England that the movement began, and as it is in the United States that the movement has perhaps proceeded to the greatest extreme, we shall consider the history of the movement with reference to these two countries.

A closer study of the period than we shall be able to devote to it would disclose the fact that the industrial stage has up to the present shown three distinct phases. The distinguishing characteristic of the earliest phase — say from 1760 to 1830 — was the development of *machine industry and the application to it of steam power*. From about 1830 to about 1870 the distinguishing characteristic of industry was the *development of steam-power transportation*. From the latter date to the present the most striking fact has been *concentration and integration in industry under a rapidly spreading corporate organization*. The word *concentration* describes a tendency toward the production of increasing amounts or proportions of any product by single

business units; while the word *integration* describes a tendency towards the production by single business units of an increasing number of commodities, usually closely allied. To study these minor periods in detail would require greater space than can be given to the subject in a book of this sort; but in our study of conditions in the United States at various points in the text we shall have occasion to throw further light upon them.

General Characterization. — As we have said, men may manufacture by *hand* or by *power*. It was a great step forward when man learned to manufacture at all; it was a transformation of society when man learned to manufacture by power. Mere human muscle is an insignificant force as compared with the external forces of nature, and man's greatest accomplishments when he depends upon his own unaided efforts are relatively unimportant. But man has more brains than any other creature, and progresses by their use.

It is hardly necessary to state to the student that the industrial stage began with the inventions and discoveries that resulted in the steam engine. The date usually associated with this important change is 1769. Here, as in the preceding chapter, it will conduce to clearness if we analyze the situation and show the characteristic contrasts between the industrial stage and the former stage of economic development.

1. *Relations between Classes.* — Under the old system of hand manufacture, each master in a trade typically worked by himself or with a few others, apprentices or journeymen, who in time would normally become masters themselves. Hence we may say that men in the full possession of their trade worked on their own account and *owned what they made* as well as the *means of manufacture*. When prices rose, the

benefit went to them. Strictly speaking, there were no class divisions in manufacture, an apprentice or a journeyman being simply a master "in the making," living on terms of intimacy in the master's family, and in many cases marrying the daughter of the master and later succeeding to the business.

Rise of Factories. — But it is manifestly impossible for every workman to own an engine and elaborate manufacturing machinery. The result of the application of steam to manufacturing, therefore, was that a few men, more enterprising or wealthier than the rest, made the experiment, bought high-priced machinery, employed workmen, and quickly distanced their conservative competitors who resisted the change. Under these conditions, as we can now see, the *factory system* was bound to grow and to supplant the old system of *house industry*. Those who resisted had to go to the wall. They did not enjoy the process nor were they patient under its operation; but at length, their fortunes wasted, their business ruined, their hope of successful resistance gone, they yielded and sullenly sought places as workmen in the new factories.

Before this great industrial change, employer and employed were not, as we have said, sharply or permanently divided by class distinctions. Living and working together, apprentice and master had that mutual respect, which came from the remembrance of his own apprenticeship on the part of the master, and the hope of a future position of independence in the breast of the apprentice. Now we have two distinct industrial classes, with interests that seem irreconcilable, and between them is a great gulf, which in an old society comparatively few men can hope to cross.

2. *The Wages System.* — Formerly the workman had what he made and sold it for what he could get. This was natural

under a system of divided labor in which each man made one article and that a whole article. But in the more efficient processes of production that obtain to-day, there is necessary a much greater division of labor, or rather combination of labor. Now, it requires many men working together to make a single article efficiently. But when a group of men have made a case of shoes, of which one has cut out the soles, another has made the heels, etc., who can say how many shoes the individual workman has made? Then, too, the employer has furnished the materials and machinery and has assumed the risk of loss. He must be paid. How many shoes shall be his portion of the whole? Some way out of the trouble must be found! As a matter of fact the way adopted was the simplest one and perhaps the best. The employer takes all the shoes, and gives the workmen for their labor, not the actual product of their labor, but a stipulated wage which is represented to be an equivalent. And thus has grown up the modern "wages system" of employing labor.

3. *Competition.* — Under the old gild system of manufacturing for purely local markets, prices, as well as many other elements of industry, were largely regulated by custom or by law. The man trying to undersell his neighbor would have been an object of public contempt and hatred. Men sometimes entered into rivalry or competition to see who could make goods of the best quality, but even here custom and law sometimes entered to reduce all to a dead level by determining what the quality of the commodity should be.

But with the growth of great markets in the industrial stage all this was changed. Factories competed not for the trade of a single city or county, but for that of a whole country or of the world. The producers were no longer neighbors living in close and friendly intercourse, but great

hostile businesses, often situated in different parts of the country. The handicraft stage had been prevailingly a period of "town economy"; the industrial stage was a period of "national economy," which in our own time has developed into something very like a "world economy." Under such conditions, competition once begun must grow ever fiercer and fiercer. It was not a competition in well-doing but in money-making.

The struggle had its good results. It was what men needed to stimulate their energy and enterprise. Invention followed invention; business rapidly centered in places where it could be carried on at the greatest advantage; labor processes were divided and subdivided as the increase of machinery and the growth of markets rendered division profitable, and by these and other means the cost of production was constantly lowered.

Thinkers of the time not unnaturally were profoundly impressed by the rapid increase of wealth due to competition — or rather to freedom of industry — as well as by the irksomeness of the old gild restrictions, to which appeals were being made by those who wished to curb the new movement. These thinkers overlooked the evils of unrestricted freedom, and in consideration of its benefits concluded that the state should not try to guide industry, as it had so long been doing, but that industry needed only to be left alone to achieve its grandest results. It will be necessary later to note some of the results of the attempts of the government to follow this principle.

4. *Banking and Credit.* — All great movements are complex, the various parts being mutually cause and effect, one of another. The preceding stage had developed money; the industrial stage has developed credit. Credit has been in part the result, as it has been in part a cause, of the other

great changes that characterize the age. Money is still used as the most common medium of exchange in retail trade and in small transactions generally, but in large transactions it has been displaced in great measure by the various instruments of credit, such as checks, drafts, and bills of exchange. Moreover, to secure a proper organization of credit, it has been necessary for society to develop the system of banking as we know it to-day. Thus one great improvement produces others and is in turn produced by them. In 1782 there was but one bank in the United States; in July, 1914, there were 7578 national banks; 14,512 state banks; 1064 private banks; and 1564 loan and trust companies,— an aggregate of 24,718 institutions that were engaged largely or wholly in commercial banking.

5. *Transportation.* — Before the beginning of the industrial stage, the problem of moving things was far less important than it has since become. Not much could be moved long distances by land while only packhorses and wagons were used. Often, too, the roads were such as prevented the best results even from such a mode of locomotion. Transportation by land being so difficult, commerce depended then, as always before, chiefly upon water. Sailing vessels, though slow, could carry even bulky commodities between places connected by water, and large cities were therefore always on the water, most frequently on the sea but sometimes on lakes and rivers. We have become more independent of waterways furnished by nature or by art. Important cities can now grow up miles away from navigable rivers or the seacoast, though the importance of water communication even to-day is attested by the slight proportion of cities that are so situated. In all this we see that civilization is marked by man's increasing domination of nature.

6. *Moral and Legal Restraints.* — Always in past stages of economic development, we have seen a sharp distinction drawn between neighbors and strangers. The family and neighbors have formed a constantly widening circle, and have always been protected by detailed law and custom; strangers, on the other hand, were exposed to whatever treatment might be considered advantageous. Indeed, the word "stranger" in many languages even had the added meaning of enemy. It is characteristic of the industrial stage that the distinction between neighbor and stranger is no longer a clearly defined one. It may be asked, Have all men, then, become brothers, or have they all become strangers and enemies? Few will claim that men in their *business dealings* are brotherly. Yet if we look at the whole of the industrial stage, we shall find reasons for believing that the change which has been taking place has been to make neighbors of those who were strangers and enemies. *The great and sudden widening of the circle of neighbors was naturally accompanied by a weakening of the feeling of neighborliness.* But in our own time more than ever before there has been a conscious effort to strengthen this feeling of neighborliness or brotherhood, and to widen the circle even beyond national lines. In the face of the horror of a great European war, men are still coming more and more to see that "above all nations is humanity."

SUMMARY

1. The industrial stage has already passed through three phases.
2. In the industrial stage men make things by machinery operated by power.
3. The older intimacy of industrial classes gives place to a sharp and wide separation between employers and employees.
4. Domestic industry gives place to the factory system.
5. The worker now sells nothing but his labor, under what is known as the wages system.

6. Competition on an ever-widening scale replaces the force of custom.
7. Credit and banking rapidly develop, both as cause and effect of the increased production of goods.
8. The increase in the complexity of economic conditions and relations has necessitated new legal and moral restraints and a great widening of the circle of neighbors.

QUESTIONS FOR RECITATION

1. Characterize the three phases of the industrial stage, and give approximate dates.
2. Name the different kinds of power used to run modern machinery.
3. Distinguish factory industry from domestic industry.
4. What is the wages system and how did it develop?
5. How did the widening of markets sharpen competition?
6. Explain the relation of credit and transportation to the other characteristic features of the industrial stage.
7. Are men more or less brotherly in our day than in earlier stages of history?

QUESTIONS FOR STUDY AND DISCUSSION

1. Can you think of other economic differences than those mentioned in the text that distinguish the industrial stage from earlier stages?
2. Can you think of other important characteristics of the latest phase of the industrial stage?
3. What are some of the ways in which the industrial revolution has changed the character of war?
4. Name some of the international movements and institutions of our time that are both causes and results of a growing world economy.
5. Have modern changes in industrial forms and methods any connection with political democracy? with education? with the question of woman suffrage?
6. Has the increasing monopoly of our time been a result of competition?

LITERATURE

Ely, R. T.: *The Evolution of Industrial Society*, Pt. II, Ch. VII.
Hobson, J. A.: *The Evolution of Modern Capitalism*, Chs. II and IV.
Toynbee, Arnold: *The Industrial Revolution*, Ch. IV, pp. 46–57.
Webb, Beatrice (Potter): *The Case for the Factory Acts.*

CHAPTER IV

THE INDUSTRIAL STAGE IN ENGLAND

It was in England that the change from the handicraft stage to the industrial stage first began and was most rapidly accomplished. The change is generally called in England the Industrial Revolution, and the name is in many ways appropriate. A change which takes place so gradually that life adjusts itself to the new conditions without great loss or suffering, — a change like that which occurs in the plant that is always growing, yet seems to be at a standstill, — such a change we call a development or *evolution*. But a change which comes so rapidly that life cannot promptly adjust itself to the new conditions, a change that breaks down the old order with much confusion and suffering, — this we call a *revolution*. It would be a mistake, however, to suppose that even in England the new system fell from the heavens without omen or hint of its coming. It is impossible in this small book to discuss the point at length; it must be sufficient to warn the student against an exaggerated idea of the suddenness or violence of the change.

To understand the English Industrial Revolution aright, we must first go back to study the condition of things just before it began.

Agriculture. — First of all it is important to bear in mind that eighteenth-century England, though already a leader among industrial and commercial nations, was still predominantly agricultural. During the century the popula-

tion of the nation grew from about six million to about nine million inhabitants, of whom probably more than half lived lives that depended directly, in whole or in part, on agriculture. In the second place, it should be noted that the revolution in agriculture in the eighteenth century in a large measure preceded and conditioned the revolution in manufactures. The English people of the eighteenth century were earlier and more keenly aware of the tremendous changes that were taking place in the country than of those that were revolutionizing industry. The later social significance of the industrial revolution has so seized upon the imagination of men that we are in danger of forgetting the real magnitude and importance of the contemporary revolution in agriculture.

Space cannot be allowed here for a complete and itemized description of agricultural conditions as they were in England in the first half of the eighteenth century. Such a description would carry us into a detailed and complicated technical and historical study. It must suffice to point out that in the form and ownership of "farms," in the breeds of farm animals, and in the processes and tools of farming, conditions were almost as widely different from those with which we are now familiar as are the steam engine and aëroplane from the ox cart and the stagecoach.

The various breeds of live stock were little advanced from their primitive originals. Such finer breeding of sheep as had been achieved was directed toward the production of fine wool for fine clothing, with comparatively little regard for the production of food. As compared with modern times, horses, hogs, and cows were very little distinguished from the wild species that are still to be found in some parts of the world. Farm tools and processes were hardly in advance of those known to the Hebrew patriarchs, as they are

pictured for us in the Old Testament. The plows, made almost without metal, could turn only the shallowest furrow; hardly any other implements were available for "fitting" the land; hay and grain were still cut with sickle, scythe, or cradle; wagons were of the simplest and rudest; grain was threshed with the flail or tramped out by slow-footed oxen upon the threshing floor.

The land was still largely held under a surviving form of the age-old manorial system, which was superimposed by the Normans upon the existing social order of the Saxons. After the invasion, William the Conqueror granted his supporters large estates on condition of their making certain payments and rendering various services, military service in time of war being especially prominent. These supporters, the lords of the *manors*, in their turn granted portions of their estates to dependents on similar conditions. Under this military organization of feudalism, the English village of the Middle Ages developed into a little world of its own, its members closely knit together into a small self-supporting community. The center of the village was the lord's manor house, of which the principal room was the hall. This hall, a familiar picture to all readers of Sir Walter Scott's novels, served as the lord's court of justice, dining room, and general living room of his household. In a large manor house there would also be a kitchen, a pantry, a sewing room, a brewery, a bakehouse, a laundry, and a chapel. The personal retinue of the lord was sometimes very large. Besides the sheriffs, bailiffs, and stewards who administered his estate, there were also squires, pages, grooms, butlers, musicians, and other retainers.

The *demesne*, belonging exclusively to the lord, was sometimes a compact area of land like a modern farm, immediately surrounding the manor house; but generally it was in large

part dispersed like the land of the lord's tenants in the common fields, as described below. The poorer villagers, the villains and serfs, were dependent upon the lord and cultivated his demesne, giving him part of their time and keeping part for their own work.

The chief portion of the estate was called the *common* or *open fields,* and these were cultivated by independent farmers and laborers, some of whom plied the various trades of the village; they were the millers, blacksmiths, barbers, cobblers, tinkers, etc. We generally hear of " three fields, " because the land was divided into three parts, and each field was again divided into a great many small strips, so that the common fields had, as Cheyney describes it, " the appearance of a great irregular checkerboard or patch-work quilt." The strips of land were allotted to the tenant farmers and other dependents, and each had a right to the produce of his strips. However, he was not free to cultivate them as he chose, but he had necessarily to follow the general custom of the village. The proper seasons for plowing, sowing, and harvesting were appointed by the reeve. Generally the three-course system of farming was followed, explaining the division of the land into the three fields. The crops were rotated, each field lying fallow every third year, after bearing wheat or rye the first year, and some spring crop, such as corn, barley, oats, beans, or peas, the second year. Various strips belonging to one farmer were accordingly scattered over the different parts of the common fields. After harvesting, all the villagers were free to graze their cattle over the stubble of the cultivated or arable land.

The uncultivated meadows formed a still different part of the manor, and after the hay was cut and gathered, the cattle of the villagers were likewise turned out to graze on these meadows. Marshes, woods, and neglected land constituted

the *waste*. The cattle, horses, sheep, and swine of the village were sent out to pasture on the waste under the care of village herdsmen.

By this description it will be seen how widely the English village of early times differed from the collection of independent farms which constitutes the modern agricultural community.

The manorial system was naturally greatly modified during the course of the Middle Ages. The serfs and the villains gradually gained complete liberty of person, and we find also a class of yeoman farmers, who were independent landowners, working their small farms largely with their own hands. How large this class had been in early times is doubtful. The land, however, still continued to be held in small strips.

Inclosure. — Large-scale operations and highly productive farming were impossible under such a confused system of holdings. The old system had accordingly to give place to a new, and "inclosure" was imperatively demanded. Under the old system, the various classes who gained their living from the land had formed what may be called a partnership; — they had shares in a "bundle of rights." Inclosure signified a putting together of the scattered strips into individual farms and an abolition of the common rights of pasturage on the open fields: in other words, it meant a dissolution of the old partnership of the cultivators of the soil, and individual cultivation of farms held separately, — just the arrangement which we in the United States take as a mere matter of course. In the preambles to the Inclosure Acts it is stated that

"the open and common fields lie dispersed in small pieces intermixed with each other, and inconveniently situated; that divers persons own parts of them, and are entitled to

rights in common on them, so that in their present state they are incapable of improvement, and that it is desired that they may be divided and inclosed; a specific share being set out and allowed to each owner."

As a result of inclosure, great improvements in the general organization of farming took place. Great technical improvements, too, suitable to large-scale farming, were introduced. "Norfolk husbandry," with its four-course rotation, alternating green crops advantageously with cereals, successful schemes of breeding, better draining, more efficient dressing with manures, and new economical uses of the soil were notable discoveries which marked an epoch in English agricultural history.

Evils of the Transition Period. — We have spoken so far only of the benefits of inclosure, but the gain to society was attended with a good deal of injury to individuals and classes. The small villager lost an opportunity of turning cattle out to graze, and if he received money compensation for this loss it was often wasted. The laborer frequently was separated from the soil, and this misfortune was greatly aggravated by the fact that he could no longer pursue in his house his simple spinning and weaving, owing to changes brought about by the Industrial Revolution, which we are to discuss in the following pages. Inclosure was simply a part of a great movement toward large-scale production, and in accordance with the laissez-faire philosophy of the time no special pains were taken to prepare the laborer for the great transition.

The yeomen, too, were greatly affected by the movements of the times, and indeed tended rapidly to disappear as a class. Inability to meet the burden of heavy mortgages and the temptation to sell their land to rich business men,

who coveted the social status and political rights of landlordship, may have been coöperating influences; but the superior advantages of extensive holdings for the growth of grain by the new scientific methods of cultivation certainly appear to have prompted many of them to change their lot for that of large tenant farmers. The economic trend, in fact, favored large farming at the time, and placed a discount in comparison on the methods of small cultivation. This was the reverse side of the shield, the front of which was agricultural improvement. The small man was not equal to the situation, which could have been met only by wisely contrived social planning and social action. Each man had to look out for himself, make his own contracts, seek his own employment, find it or go without, educate or not educate his children as he saw fit, etc. In fact, the entire life of the village community was radically altered. It was no longer an organic, self-centered whole.

Manufacture. — But it was in the department of manufactures that the greatest change was to occur. In 1760, the system of hand manufactures was still general. When Adam Smith, in his *Wealth of Nations*, published in 1776, wrote, "A man grows rich by employing a multitude of manufacturers," he was using the word manufacturers in its then usual sense, to denote artisans or mechanics. The principal manufactures were woolen goods, which England exported in 1770 to the value of about £4,000,000, that being nearly a third of her total export trade. The methods of manufacture were primitive. In the textile industry, for instance, the "manufacturer" had his home, his cows, his horse, and his poultry; he bought his wool; his wife and "spinster" daughters spun it into yarn; and together they wove it and sold it at the "fair," enjoying all the proceeds. As the spinning on the old spinning-wheel was done one thread at

a time, it followed that a weaver with a hand-loom could work up the yarn more rapidly than it could be spun.

Even before 1760, however, a change in the system of making and marketing had already begun. Cities began to attract the hand-workers. The inevitable tendency to divide the processes of production showed itself. The workers found it difficult to attend to the buying of the wool, the spinning, the weaving, and the selling of the finished goods. So the processes were divided, and middlemen had begun to appear, who bought yarn from the spinners and sold it to the weavers. Later, in some cases, they ceased to sell the yarn, supplying it instead to the weavers on contract, keeping a claim upon the cloth, and paying a stipulated sum for the weaving. Thus the old "manufacturer" had already in many places become a *workman*, a wage-earner, and in a measure dependent upon a "capitalist," who furnished the stock. Many of the germs of the factory system therefore existed as early as 1760, though as yet the work was generally done by hand power with very simple implements.

What has just been said in describing the technical conditions in the woolen industry would apply with only necessary changes to the other old English handicrafts. Next in importance to the woolen industry was that of iron; but England in 1737 imported perhaps twenty thousand tons of iron, or more than she herself produced. After 1740 the iron trade had begun to fall off because supplies of charcoal for the charcoal smelting of the time were almost exhausted. Other forms of manufacture, that are now of first importance in England, such as cotton, linen, and silk, had hardly begun.

Transportation. — Such goods as were manufactured could be moved within the country only with great difficulty

and at great expense. Transportation facilities were very backward. One traveler of the time, who speaks of the highways as "most execrably vile," tells us that he found ruts four feet deep, and that he "saw three carts break down in a mile of road." Such being the condition of the roads, pack horses were still the common means of transporting goods to and from inland markets. The only improvement before 1760 consisted in the building of a few canals.

Economic Legislation. — Of all the characteristic conditions, that of the economic legislation of the period seems most strange to the modern reader. The medieval notion of government was still nominally in force. In general, this notion was that detailed special legislation was required for many cases in which we of to-day regard general laws as preferable. Thus the state passed many laws to regulate religion, agriculture, manufacture, and commerce. Some of these laws require our special attention at this point. We have already remarked upon the fact that men of the earlier days did not understand or believe in competition. They dreaded the mischief that a stranger might work, coming into a town and carrying on trade in an irregular fashion. The circulation of laborers from one parish to another, or from one town to another, was also restricted by what is sometimes known as the *Law of Settlement*. This originated in a statute, passed in 1662, which provided that a workman coming to a parish must, within forty days of his coming, give evidence or surety guaranteeing the parish against his becoming a charge upon the taxes for the relief of the poor. The act was originally intended as a measure against wastrels and vagabonds. In its application, however, it not only affected vagabonds but every poor man wishing to move from one parish to another, until it became, in Adam Smith's words, "often more difficult for a poor man to pass

the artificial boundary of a parish, than an arm of the sea or a ridge of high mountains." Another law obstructing the free circulation of labor from one employment to another was the Elizabethan *Statute of Apprenticeship,* providing that one could become a member of a trade only after seven years of apprenticeship and only in a specially prescribed manner. This statute was based upon older statutes of the craft-gilds existing for centuries before. The purpose of this regulation was to protect the various trades from overcrowding and from irregular methods. It must be remembered that at the time when such regulations had grown up competition in the modern sense was an impossibility, and nothing but such customary or legal restrictions could avail to guard the interests of the individual and society.

Wages. — Perhaps the most striking of all the economic legislation of the time was the old law which left to the boards of county judges the work of fixing the wages of workmen. Historians differ in opinion as to how generally or rigorously this law, which was embodied in many statutes running back for centuries, had been enforced, but probably it had never been entirely inoperative, and in any event the existence of such statutes throws a flood of light upon the state of mind of the dominant classes in England.

In explanation of the law it was often held that workmen would be oppressed if left to the mercy of employers; but the main purpose of the law seems rather to have been to protect the employer against high wages, and the spirit of the administration of the law seems to have conformed to that purpose. Inasmuch as the workmen were thus "protected" by law in the matter of their wages, combinations among them to improve their condition were held unnecessary and dangerous, and were therefore strictly forbidden.

The Condition of Thought in 1760. — We should fail to

understand the Industrial Revolution were we to confine our attention to the economic life. In 1760 there had recently begun a tremendous revolt against the whole system of legislation and government just described. But it would be a mistake to suppose that this revolt, which eventually carried everything before it, showed itself only in the field of industry. Indeed, the restrictions that aroused the greatest opposition were those upon conscience and religious worship. Next to religious liberty, political liberty was the desire of all Englishmen. Even while restrictions upon trade were being accepted without vigorous protest, the passion for personal liberty worked itself up to a fanaticism.

It was under the influence of this spirit of protest that Adam Smith wrote, and in 1776 published, his *Wealth of Nations,* the most influential book on economics that has ever been written. Men — so runs his argument — are by nature free and equal. Inequalities are of man's making, and are to be avoided. Leave men alone and equality will reassert itself. What men need in their business is not protection but liberty. Under a system of free competition each man will seek his own interest, and, in seeking his own interest, will be led by a sort of natural and beneficent providence to promote the best interests of society as well. If the result is not the best that is ideally conceivable, it is at least the best that is practically possible, and is certainly better, thought Smith, than can come from any interference of government.

There is an interesting story, perhaps apocryphal, that at about this same time in France a group of merchants presented themselves before their king to protest against restrictions under which they labored. The king, after listening to their statement, asked them benevolently what they would have him do. Whereupon, as the story runs,

the spokesman of the party, Monsieur de Gournay, answered laconically: "Sire, laissez-faire; laissez passer." These words "laissez faire" have for a century been used to describe the economic philosophy and the political practice of passivism, especially in industry. Whether such an incident gave rise to the name, or whether the name made the myth, is immaterial. The story, if not true, is well found.

Changes in Manufacture. — In 1769, while Adam Smith was writing the book that was to exert so profound an influence upon the economic thought and practice of the future, a friend of his, James Watt by name, was preparing the way for a revolution in the world's industry, by his inventions in connection with the steam engine.

In the same year, too, there began a series of inventions which, during the next fifty years, completely revolutionized the textile industry, and incidentally gave cotton manufacture, instead of the manufacture of woolens, the first place in English industry. The invention of the spinning-jenny first made possible a vast increase in the production of yarn for weaving, and since better goods could now be produced at a lower price than before, the demand for the goods was much increased. Hence weavers, still using the old hand-loom, were kept busy at higher wages than they had before received. But within a few years the power-loom for weaving was invented and improved, and many of the weavers found themselves out of employment. As it was possible for a single person to tend four power-looms, three out of four of the workmen were thrown out of a job until the increased demand for the finished goods should increase the number of looms. Moreover, as weaving by the power-looms required deftness rather than strength, women and children came to be employed instead of men, because they could be hired at lower wages. Just at the close of the

century, Eli Whitney, our Connecticut Yankee, gave a still further stimulus to the cotton industry by inventing the cotton gin, a device for clearing the cotton of its seed. The greatest change was wrought in the cotton-manufacturing industry. For technical reasons England had been unable to establish this industry, which was carried on chiefly in India; but the new inventions for textile manufacture and the introduction of steam power quickly changed the seat of the industry from India to England, and gave it a foremost place in the English economy. Similar results attended changes in the manufacture of woolen, linen, and silk goods.

The new machinery was at first operated by water power, and factories first sprang up chiefly in North England in places where rapidly flowing streams furnished an economical "head." Soon, with the development of the steam engine, and the resulting development of coal production, the center of industry was transferred to the "Midland" counties, where England's iron, the material of her machines, and England's coal, the basis of her motive power, underlie the whole region.

By the invention of the steam engine, the output of England's coal mines was vastly increased, since shafts could now be sunk deeper and the mines kept free from water. With increased supplies of coal, iron could be worked by the blast furnace, instead of by the old process of charcoal smelting, and the iron trade was therefore quickly revolutionized. The importance of this change may be understood when we remember that under modern conditions of industry those nations that surpass in the production and manufacture of iron and steel for their machinery hold the leadership of the world's trade.

Changes in Transportation. — The great change in

methods of farming and manufacturing naturally gave a new stimulus to the development of improved transportation facilities. The public highways were first greatly improved under the direction of such engineers as Telford and Macadam, from whom methods of road construction have taken their names. New and longer canals were dug, and the movement would have gone much farther had it not been checked after 1825 by the development of the system of steam railways. Even before 1825, when the first steam railway was opened, steam had for some years been successfully applied to water transportation. Within a half century, England became one vast network of railways, and it became possible to transport the bulkiest commodities from one end of the kingdom to the other more cheaply than they had been moved from one county to another with the old means of transport. Indeed, wheat can now be carried from our Western grain fields and laid down in the English markets more cheaply than it could be moved an average distance of from thirty to forty miles in the England of 1760.

Changes in Economic Legislation. — With the passing of the old industrial methods came a demand for freedom from the old vexatious restrictions. Whatever might have been said in justification of such restrictions in earlier days, the time for them had now passed, and they were destined to go.

The old laws were, of course, not repealed in a body. Such a thing never happens in England, and is a rare occurrence in any country. Some laws were repealed, some simply died. Thus, the law requiring seven years' apprenticeship before one could enter certain trades died during the latter part of the eighteenth century. Years afterward, at the beginning of the nineteenth century, in the labor troubles of the time, some workmen in desperation turned back to

the old law and prosecuted employers for violating it. The result was that the law was at first suspended and later repealed, as being plainly ill adapted to the new conditions of industry. Thus, little by little, the old laws were repealed or forgotten, and men were left free to bargain and manufacture as they pleased.

Labor Laws. — Of the many old laws regulating labor, it must be remembered that they had been designed not so much to help the workmen as to check their growing power and aspirations. When Adam Smith declaims against labor laws, he has in mind laws directed against labor, not laws like those of modern times, which have been designed to benefit workmen. Indeed, he says in one place that if any law chanced to be beneficial to labor, it was sure to be a just law. A striking instance of the unfairness of the old labor laws is seen in the case of the statutes against combinations. Although from the first capitalists were allowed to combine, workmen were forbidden to do so under severe penalties. Even after the laws bearing on apprenticeship, regulation of wages, and inspection of goods had been repealed or had lapsed, this law against workmen's combinations continued operative, and under it men who attempted to form labor-unions were at times severely punished. But eventually this law also was repealed.

Results of the Changes. — 1. *Industrial Disturbance.* — The results of the great changes that constituted the Industrial Revolution have been startling. The area of the markets for various commodities was marvelously widened, and distance from the consumer no longer weighed heavily in the mind of the manufacturer in determining the placing of his plant. The balance of convenience rather inclined toward concentrating industries in those places where they could be carried on to special advantage. Thus,

there was first a concentration of industries near favorable water power, and later near facilities for the production of steam power. This change took place usually not by the removal of old plants and industries to new localities, but by the growth in favorable centers of such powerful rivals that the older factories were gradually forced to go out of business. Thus, not only were country artisans forced out of employment, but even certain towns were sacrificed to others that enjoyed a more favorable situation.

2. *Growth of Cities.* — Another important result of the changes in the methods of industry, and particularly of the changes in the methods of transportation, was the growth of cities. While concentration of population has had many beneficent results, and promises still other and greater ones in the future, the evils connected with such aggregations of people have formed one of the most serious problems that our generation has to face.

3. *Fluctuations in Trade.* — One cause of the comparative simplicity of the old and slow-going system of manufacture and trade was its great regularity. One year was much like another. Producers could calculate the amount of their product that would be required, and could calculate also what would be the return to their labor. With the growth of national and international markets came increasing complexity of wants and increasing fickleness of fashion. It was no longer easy to know what things would be wanted or in what quantities goods would be taken by consumers when produced. A period of overcautious production would lead to unduly high prices. New capital would be tempted by the profits, and the old manufacturers would forget their caution. Then would come a glut, prices would fall disastrously, factories would close, and workmen would be thrown out of employment. But depriving a large section

of the consuming public of its purchasing power, — its wages, — is not an ideal method of reviving industry. Thus times of plenty for the workmen would be succeeded by times of great want, with all the evil result upon character that uncertainty of life and work can produce.

Reaction against the Passive Policy of Government. — We have already explained that accompanying the change in industrial methods went a radical change in opinion as to the proper attitude of the state toward human affairs, including industrial affairs. This change was in part due to a feeling that men had really become so intelligent and reasonable and just that they would know and respect one another's rights. But the chief reason for the change was the general acceptance of Adam Smith's central doctrine that self-interest will regulate men's actions for the general good more nearly and more surely than can any statutes framed by man. We have now to study in detail some of the points in which this theory of governmental passivity has broken down under the test of experience, and some changes that men have found themselves compelled to make in consequence.

Although we shall have occasion to refer to the matter again in studying the industrial history of our own country, it may be well to point out here that in no other country did the laissez-faire idea gain such a hold upon the minds of the people as in the United States. Of the great modern nations Germany was probably least affected by the obsession, and France less than England, while even in England recognition of the necessity of social control of industrial forces and movements developed gradually during the nineteenth century. In our own country we were so slow in awaking that some critics feel that we almost lost our birthright to our wonderful natural inheritance. Indeed it is only during the few years of the present century that we

have become alert to the situation; and we are still confused as to remedies, however painfully conscious we may be of the evils of our plight. The acuteness of our situation, and the suddenness of our reaction from our earlier optimism and credulity, probably constitute the best single explanation of the violence and uncertainty of the social, political, and legal revolution through which we are now passing.

1. *Public Inspection of Goods.* — In repealing the old laws for the inspection of wares, it was claimed that under the free play of self-interest in competition, cheating would not pay and would therefore cure itself. Needless to say, these hopes were never realized. Men might perhaps be safely left to pursue their own interest in buying goods if they knew enough to do so, but as a matter of fact they do not. Indeed, it was far easier to assure oneself of the quality of one's purchases in the old days when the goods were of less variety, were more simple in their character, and were made by craftsmen who were not remote from the purchaser. But who in our day can tell the quality of baking-powder, of ground spices, or of a thousand and one things that are subject to adulteration? How many can distinguish butter from oleomargarine? How many can detect fever germs in water or trichinæ in pork? For all these and many other things the ordinary buyer's knowledge is worthless: an expert must be employed. And what guarantees of honest wares are offered by modern commerce, in which it is sometimes open to question whether greater profits can be realized by following the principle that "a satisfied customer is our best advertiser" or by unscrupulous reliance on easy methods of gulling the public? Such questioning has been justified by the experience of the English people, and their law now provides for the inspection by government experts of meat and fish, groceries, drugs, butter, and other articles

of food. Gold plate and silver plate, gun barrels, steam boilers, drains and sewers, gas, weights and measures, — all these are tested on the same general principle that the government through experts must guard the people from those serious dangers against which they cannot or habitually do not protect themselves. In reality, men do of course in this case protect themselves, but they do so through their government, which represents their coöperative effort, rather than each man for himself. For every man to attempt to do everything directly for himself would be to return to barbarism. Division of labor and coöperation are causes and signs of advancing civilization.

2. *Social Protection of Labor.* — Nowhere was freedom more absolutely demanded at the time of the Industrial Revolution than for labor, and nowhere was it more needed. The old restrictions were galling and burdensome alike to masters and men. But what of the freedom that took their place? When machinery was introduced, it became possible to employ women and children in work that had formerly required the labor of men. But modern machinery is as destructive of life as a cannon if human life gets in its way; and the destruction of life and limb in the early days of machinery was appalling. Here again it had been ingeniously argued that self-interest would lead employers to protect their employees from injury of every kind. The basis of the argument was of course the assumption that such protection would be to the benefit of the employers. But this assumption is not valid.

So scandalous was the neglect of the early manufacturers that a reaction set in against the old license, and laws were passed requiring under heavy penalties what the simplest dictates of humanity ought to have secured and would have secured if men had been fit to be left to unregulated competi-

tion. The employment of children four and five years of age, bad ventilation in factories, working over hours, neglect of children's education, and many other evils, called for a like interference.

The result of a public recognition of these evils was a series of Acts of Parliament, known as the Factory Acts, beginning with that of 1802 and running down to the present time. Laws now in force provide, among other things, for: (1) the fencing in of all dangerous machinery; (2) ventilation and other sanitary conditions in factories; (3) a ten-hour working day for women, "young persons," and children, in most industries; (4) a Saturday half holiday for women, "young persons," and children; (5) prohibition of employment of any persons under eleven years of age, — or of persons under sixteen, unless they present a certificate of fitness; (6) schooling for children half of each day or full hours on alternate days; (7) the keeping of a register by employers in which they must enter all children under 16 to whom they give out work, thus giving opportunity to inspectors to inspect the places where such work is done; (8) government inspectors to see to the enforcement of the law. This last provision has been found by experience to be one without which the rest of the legislation might as well not have been passed. In contrast with the provision which limits the work of women and children to *not more* than ten hours per day, place the old law of apprenticeship by which a boy must work *at least* from five in the morning till between seven and eight at night, with time off for meals. The change is significant as showing that whereas the old laws were framed in the interest of employers, modern ones have been designed in the interest of employees, *or, to consider it more broadly, in the permanent interest of the people as a whole.*

3. *Trade-unions and the Government.* — As the wage system developed during the Industrial Revolution there was a natural tendency for the wage-earners to group themselves by trades into unions for the protection of their interests. So jealous were the ruling classes, and so fearful lest the lower classes, who greatly outnumbered them, might by combining abate their power, that they had passed laws against such combinations at intervals ever since 1360. Hence, when the wage-earners found the need of union rapidly increasing, they were driven to secret organization for lack of the open methods which were denied them. In 1800, Parliament, finding that, in spite of the law, unions were steadily gaining in strength and numbers, passed a comprehensive law to suppress them, even declaring illegal "all agreements between journeymen and workmen for obtaining advances of wages, reduction of hours of labor, or any other changes in the conditions of work."

So odious did this law become that employers sometimes voluntarily pledged themselves not to have recourse to it. In 1824, after a prolonged agitation led by Francis Place, who at first received less support than might have been expected, Parliament confessed the law a mistake, and at the same time repealed earlier laws relating to combinations of workmen. Thus freed from outlawry, trade-unions grew at an astounding rate. But they were still subject to legal persecution of one sort or another. Especially did they suffer at the hands of the courts from adverse decisions which declared their united efforts to advance their interests conspiracies "in restraint of trade." In 1875, a law was passed which expressly declared that the purposes and actions of trade-unions were not to be held unlawful on the ground that they were in restraint of trade, and in the second place, that acts which are lawful when done by one

person shall be held lawful even when done by two or more conjointly, if such acts are in furtherance of an object sought through a trade dispute. Finally, in 1906, The Hudson Trades Dispute Act conferred still further immunities and privileges upon trade-unions in the matter of strikes, boycotts, and picketing.

Moreover, during recent years England has introduced sickness and accident insurance, old-age pensions, minimum wage regulations in "sweated" trades, to mention only a few features of her provision for the welfare of the working classes.

Conclusion.—We have pointed out a few of the many ways in which the new theory failed to justify itself when applied to the new economic power. The new power was that which created the revolution. The new theory was that which asserted the universal efficacy and beneficence of unrestrained industrial freedom, or unregulated competition. The theory and the power were alike strange to men. The new theory promised an immense increase in the product of national industry and a just distribution of the product among those who contributed to its making. An immense increase of product there was, though this was due to inventions and to enlarged markets as well as to competition. But the theory failed to fulfill its promise as to the distribution of the new wealth. Not until benevolence was standardized and enforced by legislation was the situation in this respect endurable. The reaction against the theory was not sudden, nor was it a conscious and definite revolt at all. The essentially practical and concrete habit of mind of the English people has become proverbial. They had been driven into the temporary acceptance of unregulated competition by the great changes in industry. When weakness in the action of that principle became manifest, they simply changed

its action little by little by applying the regulative power of society. And when the nineteenth century had passed, it was found that the good in the competitive principle had been retained, while the principle in its universal form had ceased to command assent. When, therefore, we hear the principle of a " fair field and no favor " and " no state intervention " advocated by a man strong in the consciousness of personal advantages, — for such he is likely to be, — we may know that he is a full century behind his time, and that he has not read or has not profited by one of the most impressive chapters of human history. For the English nation to-day, after a fair trial of free competition without interference by organized society, has undeniably returned to the principle of collective action which she had sought to abandon. Bitter experience has taught her that it is among the true functions of society to protect its citizens and to further their material and social well-being by every law and every activity which can contribute to that end.

SUMMARY

1. In 1760 agriculture was still primitive, manufacture was in the handicraft stage, and there was much restrictive legislation.
2. After 1760 there was a revolution in the system of landholding and landworking, transportation was revolutionized, and the factory system was developed.
3. The Industrial Revolution produced great social confusion, immoral competition, and violent fluctuations in trade.
4. A reaction against the old absence of restraint has made itself increasingly manifest in the years that have followed, and especially during the last quarter of a century.

QUESTIONS FOR RECITATION

1. How was production carried on before 1760? What was the nature of the markets?
2. What changes in social organization resulted from the Industrial Revolution?

3. Describe the struggle of labor unions for existence and for legal recognition.
4. Who was Adam Smith? What was his significance as a voice of the time?
5. Discuss the question of the passive policy of government.

QUESTIONS FOR STUDY AND DISCUSSION

1. Do you see any resemblance between the eighteenth century struggle of the handworker against the factory and the present-day struggle of the village storekeeper against the "mail order" department store?
2. If workers in the nineteenth and twentieth centuries have won stupendous victories from public opinion and from lawmakers, does the fact suggest anything as to the future of the labor movement?

LITERATURE

Cunningham, W.: *The Growth of English Industry and Commerce*, Vol. II, Bk. VIII, Pt. II.
Gibbins, H. de B.: *Industry in England*, p. 204 (revised edition).
Hammond, J. L., and B.: *The Village Laborer*, 1760–1832.
Hobson, J. A.: *The Evolution of Modern Capitalism*, Chs. II and IV.
Hone, N. J.: *The Manor and Manorial Records.*
Hutchins, B. L., and Harrison, A.: *A History of Factory Legislation* (in England).
Innes, A. D.: *England's Industrial Development.*
Price, L. L.: *A Short History of English Commerce and Industry*, pp. 184–192, 192–201, 210–217.
Prothero, R. E.: *English Farming, Past and Present.*
Report of the United States Industrial Commission, Vol. XVI, on Foreign Labor Laws.
Toynbee, Arnold: *The Industrial Revolution*, Ch. IV, pp. 46–57.
Webb, Beatrice (Potter): *The Case for the Factory Acts.*

CHAPTER V

THE INDUSTRIAL STAGE IN THE UNITED STATES

I. The Industrial Revolution in the United States and England Contrasted

The story of the Industrial Revolution and of the industrial stage in England is in great part the story of the revolution and the stage in all countries that have gone through it. In studying the economic history of the United States for the same period, it is therefore unnecessary that we should enter again into all the details that go to make up the great movement. But as no two countries have the same racial and physical peculiarities, so no two countries are affected in precisely the same way by great industrial changes. The economic history of the United States is, in part, the history of the attempt to apply the principles of free competition and a minimum of state interference to a new country instead of to an old one, as was the case with the English experiment. This difference is so great as to have modified the result materially, and it will therefore be profitable to study these differences more particularly.

The principle of non-intervention was adopted in our own country even more fully than in England, where the state never ceased to exercise a close supervision and control over many life interests, including religion. In some respects the results in the two countries have been parallel, in others not. At first sight it may seem that American experience

does not so sharply condemn the passive policy of government as does that of England, and the question may be asked whether our conclusion from the history of English industrialism was after all correct? Which of the two countries has given the principle of unregulated competition the fairer test?

It will be remembered that the suffering which attended the Industrial Revolution in England was of two kinds and from two different sources. One was due to the rapidity and magnitude of the industrial change; the other was due, not to the change, but to the manner in which the change was effected, and to the system under which the new industry was carried on. In other words, one was due to change, the other to unregulated competition. It is necessary to keep these two causes distinct, if we are to reach a just conclusion regarding the influence of unrestrained competition upon industrial life.

1. **Comparative Difficulty of Transition.** — We have already seen how difficult was the transition from the old to the new order in England. In our own country, the difficulty was slight, or perhaps we might more properly say that there was no transition, since, when the Industrial Revolution began, there was in America almost no manufacturing at all. Our industries were scarcely started when the spinning-jenny, the power loom, and the steam engine were introduced, and so almost from the beginning the factory system seemed the natural one. Such change as there was from hand industries to power manufacture produced results similar to those witnessed in England; but the change with us was so insignificant in extent as scarcely to attract public attention. Moreover, artisans who were thrown out of work had greater opportunities, and, on account of the less fixed conditions of life, were more ready to get new em-

ployment in the growing industries of the time. Thus, the change which in England was a *revolution* was in America an *evolution*, a process of construction with little destruction, since there was little to destroy.

2. **Comparative Difficulty in Operation of Competition.** — Under the system of unrestrained competition, the English workmen played a continually losing game; such was not the case with their American cousins. Just as the *smallness of our industries* at the beginning of the Industrial Revolution mitigated the sufferings from the *change*, so the *greatness of our territory* mitigated the sufferings from the *system* of competition. The average American does not realize adequately the difference between Americans and Europeans in their readiness to move about from place to place, a difference due in part to the fact that all those now in our country are either immigrants from other countries or the descendants of immigrants of a comparatively recent time. A comparison of census figures of our country with those of European countries shows that with them the proportion of persons living in town or country other than that of their birth is slight, while with us it is very great. Thus the census of 1880 disclosed the fact that only one-half of the native born inhabitants of the country were living in the country of their birth, and this despite the fact that a large proportion of the total population is made up of children, who, of course, would generally be living in the country of birth. Similarly, the census of 1900 shows that nearly thirty-two per cent of the total population of the country were living in states other than those of their birth. In 1910, as shown by the thirteenth census, 14.7 per cent of the whole population were foreign born, and 21.7 per cent of the remainder — or 18.5 per cent of the whole population — were living in states other than that of their birth,

a total of 33.2 per cent. Moreover, throughout our history, until within recent years, the American workman has always been able to secure cheap or even free land where he could earn an independent living. Under these two conditions of ready migration and easy access to independent proprietorship, it was impossible for the downward pressure of competition to work out such results in manufacturing industry as must show themselves when no counteracting influence is opposed. Indeed, we may say that *competition in America was regulated from the beginning, not by legislation, but by those great industrial forces and opportunities which we have just mentioned.*

But this influence could not be exerted forever. Our territorial resources, great as they are, have their limits. The American "frontier" has disappeared forever. We have already reached the parting of the ways. Henceforth our reliance must be placed upon some other agency than the free bounty of nature. As free land has become less and less abundant, the wage-earners of the East have had forced upon them conditions of life that have kept down, where they have not absolutely lowered, their standard of life. Extremes of wealth and alienation of social classes have become so great as to arouse the apprehension of all thoughtful men. Labor riots that call for military interference, such as those at Lawrence, Massachusetts, and in many parts of Colorado, testify to the fact that we have not escaped, that in the future we can hope less and less to escape, the friction that accompanies all unfraternal relations among men. We have been greatly blest in that we have escaped the worst results so long.

Concentration and Integration of Modern Industry. — Thus far we have been considering the effects of competition chiefly upon the employees, and in tracing these effects the

history of England has been particularly instructive. When, however, we turn to the results of such competition in the case of employers, we find that our own country offers the most striking illustrations. Owing to the peculiar circumstances of our situation, the results of competition among employers have developed more rapidly here than abroad. Though repeated conflicts with their workmen have led to a certain feeling of common interest in the matter of labor, and even to frequent combinations for mutual defense against the demands of employees, yet on the other hand the principle of competition has until recently made them almost Ishmaelites in their business relations with one another.

Those resources to which we have referred as mitigating the suffering of employees have not in the same way been available to the employers. Tied down to their large investments of fixed capital, they have too often been compelled to stand and fight out to the end this war without quarter. In every such warfare the number of combatants tends to decrease. As old rivals are killed off, the successful survivors acquire greater skill and greater power in the conflict. With the passage of time greater and greater equipment is required to give any hope of a successful struggle. There are industries in which no such concentration has taken place, but for a great and apparently growing number of industries our description holds true. Thus, in spite of the enormous growth of our industries and population, the relative number of competitors in many industries has of late shown noticeable decrease. We cite but one instance, and that not the most striking, from the twelfth and thirteenth censuses of the United States. In the report of the twelfth census, occurs the following: "The present tendency toward large industries under one management is illustrated in the statistics of coke production in

1899. The total amount of coke produced has increased 96.2 per cent, and the value of all products " (including by-products) " has increased 115.7 per cent, while the number of active establishments reporting for 1899 was only 23 (or 10.6 per cent) more than the number reporting for 1889." From the thirteenth census it appears that the amount of coke produced increased 100.5 per cent from 1899 to 1909; the value of all products in the industry, 156.9 per cent; and the capital employed, 317 per cent; whereas the number of establishments reporting increased by only 30.7 per cent. This is typical of what is taking place in an increasing number of industries.

Competition of small producers attained its maximum in the decade between 1870 and 1880, when it became familiarly known as " cut-throat " competition. But for the existence of free land, undeveloped resources, and the constant increase of inventions, widespread disaster must have resulted. Since that time the relative number, and in some cases the absolute number, of competitors has decreased in a considerable part of the industrial field. In the thirteenth census of manufactures, for 1909, a classification of establishments is made on the basis of the reported value of their annual product. It appears that 43.8 per cent of the value of all manufactures was produced in establishments of the highest class, each reporting $1,000,000 or more a year; and that 82.2 per cent was similarly produced in the two highest classes, each reporting an annual product of $100,000 or more a year. In the same way, 30.5 per cent of all employees reported in manufactures were employed in establishments of the highest class, and 74.3 per cent by the two highest classes combined. And both the highest class and the two highest classes combined show increased percentages for 1909 over 1904, both for value of product and for number of employees.

In the years from 1898 — which marked the close of the severe industrial depression that had lasted from 1893 — to 1907, the tendency to concentration became most marked, many of our greatest industrial combinations dating from this period. At the same time, and undoubtedly as a result, there occurred an interesting change in the philosophy of American business men. Before, they had all given unquestioning allegiance to the inspiring principle that "competition is the life of trade." With the organization of the "billion-dollar steel corporation" and other mammoths of the same class, there came an about-face, and in recent years many great industrial managers have vied with the socialists in insisting that not competition, but combination or coöperation, is the life of trade. We shall have occasion later to consider the measure of truth in this claim; here we are concerned only to note the origin of this interesting change in business philosophy.

Recently the movement toward large-scale industry has taken on another phase. In addition to *concentration* of industry, we are now having a rapidly increasing *integration* of industry. Large business concerns are finding it profitable to carry on, under one management, several stages of production that formerly represented separate industries, and also in many cases other closely related industries. Thus the Standard Oil Company is a great producer of crude oil; carries most of the "crude" of the country to refineries through its own pipe lines; makes its own auxiliary materials and aids to marketing, such as sulphuric acid, boxes, barrels, cans, etc.; produces a thousand and one sorts of kerosene, gasolene, lubricating oils, paraffin, asphalt, etc.; and carries its own finished products to home and foreign markets through its own agencies of distribution, including a great fleet of tank steamers.

Monopolies. — Concentration of industry may be incomplete or complete. *Incomplete concentration resulting from combination may not lessen competition at all; it may even increase the sharpness and bitterness of the competition.* It simply gives business into the hands of those producers who are best able to continue it under the vigorous conditions which existing competition imposes upon the rivals. But when concentration in any industry is complete, we have the entire industry under the management of a single individual, partnership, or corporation. When such a state of things exists, or is so nearly approached that a single unified management can exercise control over the supply, and hence over the price, of the product, we have a monopoly.

We might naturally expect that where the tendency to concentration is strongest, as in the United States, the tendency to complete concentration, or monopoly, would also be strongest, and American experience would seem to justify the expectation. Thus two of the great problems now before the people of our country are those connected with the concentration and integration of industry, which leads to the so-called trusts, and with the complete concentration of an industry, which is monopoly. It is particularly in the class of so-called *natural monopolies* that the development has in recent times been most rapid and most startling. Natural monopolies are those that rest, not upon the will of society, but upon the economic characteristics of the business itself. Such, for instance, are all the monopolies of transportation and communication. The reason for the unusual development of the monopoly problem in our own time lies in the fact that the whole transport system of the world has been developed within little more than fifty years.

II. Social Regulation of Competition in the United States

Labor Legislation in the United States. — We have already noted and explained the fact that the misery and degradation of the wage-earning classes, which in England led to a reaction in favor of an active policy of government, were not felt so quickly nor so keenly in the United States. With us, therefore, there was in earlier days no urgent demand for legislation in behalf of the workers. Similar conditions, however, led in the end to like results, and in most of the commonwealths of the American Union we now have a considerable body of factory legislation for the protection of the wage-earners and for the promotion of their welfare. Massachusetts, among the foremost of the states in the extent of her manufacturing interests, was naturally among the earliest to pass labor laws. The spread of such legislation in our country illustrates the principles which we have already explained, for in general it has followed the line of industrial development as it spread from New England to the West and South.

Within recent years, however, state pride and a quickened social sense have led many relatively non-industrial states to imitate the labor codes of their industrial neighbors, and a gratifying advance has marked the opening years of the twentieth century. Even so, however, the American student of the social problem has sadly to admit that we have become laggards in the forward march of nations towards a higher and more humane civilization; that our once boasted leadership has passed from us to other lands. While our great economic resources still tempt labor as well as capital from abroad, the enticement of the lure is

weakened for labor, as it is strengthened for capital, by our inadequate attention to the welfare of our workers.

Especially backward in the matter of labor laws are several of the Southern states, in which capital from the northeastern part of the country, and particularly from New England, has been largely invested during the last quarter century. It is found that all those states, which to a certain extent compete with Massachusetts and other New England states in textile manufactures, repeat many of the darkest pages of early English experience. While they are possibly gaining a temporary industrial advantage over the older state, public opinion is rapidly organizing to protest against a temporary industrial advantage gained at the cost of the permanent welfare of the workmen of the South as well as of Massachusetts. True, some of the advantages possessed by the Southern states are derived from climate, proximity to raw material, the absence of antiquated machinery, etc. If, with good labor laws well enforced, these advantages are not offset by the better labor market of Massachusetts, her greater accumulation of specialized capital, with lower interest charges, her lower freight charges, her nearness to the consumers' markets, her helpful traditions of production, etc., the new states will confer a benefit upon society by producing the goods, even though it be at a serious temporary cost to the old New England state. Notwithstanding many peculiar difficulties, the South has already begun to follow England and Massachusetts in regarding higher and more permanent interests than the mere increase of output, and this movement must continue.

But apart from state legislation we are to be assisted by federal legislation, if the new Federal Child Labor Act, signed by President Wilson on September 1, 1916, is finally

sustained as constitutional by our courts and is properly enforced. This law, hailed as a new Emancipation Proclamation, prohibits the shipment in interstate commerce of the products of mines, quarries, shops, factories, and canneries in which child labor is employed contrary to the provisions of the Federal Child Labor Act. These provisions are that children under sixteen years of age shall not be employed in mines and quarries, that children under fourteen years of age shall not be employed in shops, factories, and canneries, and that between the ages of fourteen and sixteen they shall not be employed at night nor for more than eight hours a day. This law is epoch-making in the history of social legislation in the United States.

Legislation against Adulteration. — America and England have also differed in their readiness to give heed to the adulteration of goods and the falsification of wares. And yet we have certainly had need of some action in these matters. Not only have we become painfully familiar with goods of the sort that unrestrained competition always produces, and that are known in England by the expressive term "cheap and nasty," but we have also with us, as commonly as anywhere else in the world, adulterations that menace life and health. The fact that the theory of non-interference has never been so completely shattered here as in England by the pressure of labor interests, coupled with the fact of the delicate balance of authority between state and Nation, probably accounts in considerable measure for our general reluctance to intrust to our government the duty of inspecting wares. Within the last few years more serious attention has been given to the matter, the Federal government and many states have moved rapidly and vigorously in the prevention of adulteration, and the growing interest in economic questions is likely to result in a better realization of our coöperative power and duty.

Social Control of Monopoly. — The question of the right relation of organized society to industry has nowhere proved more embarrassing and difficult than in the case of monopolies, and especially of the great class of monopolies which we have called natural. Here, even more than elsewhere, it has been brought home to men that the laissez-faire philosophy and practice cannot safely be accepted. The history of attempts to control these monopolies is long and confusing, but we may distinguish three fairly distinct methods: attempts to enforce competition, public control, and public ownership.

1. *Attempts to Enforce Competition.* — When the monopoly problem on a vast scale first presented itself, society was still possessed by the idea of the beneficence of the universal rule of self-interest. It was natural, therefore, to attempt to enforce competition in the new field of industry. Railway charters and charters for municipal service corporations were granted freely, even recklessly, in the belief that competition would thus be secured. But competition cannot exist where monopoly is natural, as will be explained in a later chapter. The whole history of attempts to secure such competition is a history of failure. A single illustration may serve our purpose. The state of New York gave a railway charter to the West Shore Company, which constructed a line parallel to that of the New York Central. In granting the charter, the state attempted to enforce real and permanent competition by stipulating that the railway should never be sold to its rival. Yet after a few years of disastrous rate "wars," the new road was *leased* to the Central in 1885 for 475 years. The same experience has been repeated, again and again, as often as the experiment has been tried.

2. *Public Control.* — The second method of solving the

social problem involved in natural monopolies is that of public control or regulation. This method began to be tried about fifty years ago with the rise of the "granger" movement, which was at first a mere unorganized uprising of farmers against railway abuses, but which later developed into an organized movement, having as its center the "Order of the Patrons of Husbandry," — commonly known as the "grangers," — founded in 1867. The political influence of this body forced many Middle Western states to pass laws regulating railway rates and binding the roads by other rules of action. Much of this legislation was so ill-considered that it was soon repealed, and the movement itself was thereby for a time discredited. But much of it was well founded, and a renewal of the effort resulted in the creation of state and federal railway commissions, with certain powers of supervision, adjudication, and control. The opening years of the twentieth century have witnessed a further advance in public regulation of public service monopolies. It is only a few years since Mr. Charles E. Hughes, ex-Justice of the United States Supreme Court, then Governor of New York State, after an unusually bitter struggle with the leaders of his party, succeeded in securing for his state the law creating Public Service Commissions and giving to them a really effective control. The example of New York State has been widely followed, and for the time being there is perhaps a more confident hope than ever before that society can solve the problem of monopoly through administrative control, while leaving ownership and management in private hands.

This growing confidence in the possibility of regulation is reflected in the law passed by Congress in 1914, establishing a Federal Trade Commission, charged with the duty of regulating trusts, — or great industrial combinations, —

very much as the Interstate Commerce Commission and the various state Public Service Commissions have been charged with the duty of regulating railways and other public service monopolies.

And yet it must be admitted that the policy of public control has hitherto proved difficult of application, not only in the case of railways, but also in the case of the large class of municipal natural monopolies. Wealthy corporations, retaining the best legal talent, have shown endless ingenuity in evasion, and great power in retaliation, as is abundantly shown in the annual reports of the United States Interstate Commerce Commission.

3. *Public Ownership.* — The great difficulties in the way of successfully applying either of the first two methods have led a considerable proportion of our people to look with favor upon the method of public ownership of natural monopolies, with or without government management of the business. In the case of municipal waterworks, the practice already obtains very generally. An increasing number of cities are taking into their own hands other forms of municipal service. Technical and political considerations make it quite possible that a given city may wisely own one form of municipal monopoly and at the same time refrain, with equal wisdom, from taking over others. This question will be further considered in a later chapter. At this point, therefore, we need only add in closing that the solution of the monopoly problem certainly lies to-day between the methods of public regulation and public ownership.

SUMMARY

1. In the United States, owing to the absence of established handicrafts in the eighteenth century and to the abundance of free land, the transition to the industrial stage was not marked by great violence or suffering in the case of the workers.

2. The intensity of competition in the United States has been felt more keenly by the manufacturers, and concentration of industry has thus been hastened.
3. American experience confirms that of England in condemning unrestrained competition.
4. The United States has found it necessary to give up the laissez-faire policy and to adopt a policy of social regulation of labor, monopoly, etc.
5. The tendency to complete concentration of industry, or monopoly, gives rise to grave social problems.
6. Three methods of solving the monopoly problem have been tried: enforced competition, public control, and public ownership.

QUESTIONS FOR RECITATION

1. Contrast the Industrial Revolution in the United States with the same change in England, (*a*) as regards the workers; (*b*) as regards employers.
2. What has been the effect of the mobility of population in the United States?
3. What is integration of industry? Complete concentration? Natural monopoly?
4. Mention some of the ways in which the government in the United States regulates competition.
5. Name and explain the different experiments in attempting to solve the monopoly problem.

QUESTIONS FOR STUDY AND DISCUSSION

1. Can you think of any economic, social, and political conditions in the American colonies that would naturally give the laissez-faire philosophy an exceptionally strong position among the people of our country?
2. Has the constitution (*a*) of the United States; (*b*) of your state, any traces of the laissez-faire philosophy?
3. Is the mobility of population likely to continue as great as it has been?
4. Is a tendency to concentration observable in agriculture in the United States? in any other country? in commerce? in mining? If concentration should develop throughout the whole of industry, can you predict any probable political and social consequences?

5. When was the United States Steel Company incorporated? In what state? What is its capitalization? Its annual earnings? What illustrations does it afford of concentration? of integration?

LITERATURE

Bogart, E. L.: *Economic History of the United States.*
Callender, G. S.: *Selections from the Economic History of the United States.*
Coman, Katherine: *The Industrial History of the United States.*
Ely, R. T.: *Monopolies and Trusts*, Ch. V, and *The Evolution of Industrial Society*, pp. 58–66.
Jenks, J. W.: *The Trust Problem.*
Johnson, E. R.: *American Railway Transportation.*
King, W. I.: *The Wealth and Income of the People of the United States.*
Van Hise, C. R.: *Concentration and Control: A Solution of the Trust Problem in the United States.*
Wright, C. D.: *The Industrial Evolution of the United States*, Pt. II, Ch. XIV, pp. 174–189.

BOOK III

ECONOMIC THEORY

PART I. CONSUMPTION

CHAPTER I

INTRODUCTORY

Utilities and Goods

We have studied the history of man's efforts to get a living, and the fundamental conditions which determine all his efforts to that end. We have now to study analytically the process by which he gets his living to-day, remembering that the process is conditioned fundamentally, and that those fundamental conditions have their roots far in the past.

Reason for studying Consumption first. — When we inquire why men display what we call economic activity, we discover at once that it is because they feel wants which they aim to satisfy. Most immediately connected with wants in any analysis of the subject is the satisfaction of them, and therefore it is not illogical to study first of all that branch of the subject which we have called by the name "consumption."

Definitions. — When anything has the power of satisfying human wants, we say that it is a good thing, or that it possesses utility. In economics, these words "good" and

" utility " are also made to apply to the things or services themselves. To give a definition, therefore, we may say that *a good or a utility is anything which can satisfy a human want.* And here we must pause to caution the student that the word " good " is applied to any such thing even though the thing ministers to a want that were better left unsatisfied. The idea from the economic point of view is simply that the thing is good in the sense of being adapted to the want, however reprehensible the want may be. Notice that this definition of the term " good " includes not merely material things such as food and clothes, but also such immaterial things as personal services. The advice of a physician and a new invention are goods that we desire and are willing to pay for, though they do not exist in any physical form. Goods or utilities, then, may first be divided into the two great classes of (1) *material things,* and (2) *personal services.* In the last analysis, of course, all goods resolve themselves into " services," either of human beings, or of other material things.

Free Goods and Economic Goods. — When we come to analyze goods further, we find that some of them are given by nature in such abundance that all of us may have our wants for them satisfied without effort. Thus, air is a utility of the first importance; but in all ordinary circumstances it is so abundant that we can satisfy our wants for it without any exertion. All such goods are therefore called *free goods.*

But we find by hard experience that before we can satisfy many of our wants, either we ourselves must make efforts, or others must exert themselves for us. The reason is that the supply of such utilities is limited either (1) by the *impossibility of increasing their number or amount at all,* as is the case, for instance, with paintings by old masters, or

(2) by the *necessity of labor and sacrifice for further increase in their supply*, as is the case with watches and houses, and, indeed, with the greater number of things with which our economic life is concerned.

As just stated, these goods as a rule can be obtained only by human exertion or sacrifice. And being thus obtained, they can be exchanged or transferred from hand to hand by those who possess them. Of course, many goods are of such a nature that they cannot be readily transferred or — as in the case of land — be actually transferred at all. In such cases, transfer of title takes the place of actual transfer of the goods. Again, it is of course impossible for one man to transfer to another any special ability that he may possess. But the services which such special ability may enable one to render may be exchanged for the services of others or for material goods, and we may regard such services as falling in the same class with the other goods we have been describing. All such goods we call *economic goods*, because they are the ones that man spends his life in acquiring, and because the wants for them and the efforts and sacrifices made in obtaining them are susceptible of such money measurement as enables them to be the subject of scientific analysis. The three characteristics of economic goods, then, are *scarcity, cost,* and *exchangeability.* To sum the matter up in the form of a definition: *Economic goods are goods which are so limited in quantity that their possession, on the one hand, regularly requires exertion or sacrifice, and, on the other hand, gives the opportunity of transferring or exchanging them.*

When we speak of *economic goods taken collectively* or in a body, we use the word *wealth, whether the mass of such goods be great or small.*

Different Sorts of Utility. — There are five ways in which

material goods can satisfy our wants. In the first place, a good satisfies our wants by reason of the elements or substance of which it is composed. Thus, coal is so constituted that under certain conditions and in certain relations it produces heat. *This utility which a thing possesses by reason of the elements of which it is composed we call* (1) *elementary utility.*

But the coal as it is in the mine is not ready to satisfy man's wants. It must first be broken up by the miner into such fragments as are convenient for man's purposes. Its form must be changed. This *utility which a good has by reason of the form in which it exists we call* (2) *form utility.* Manufacturing gives as its result form utilities, and we generally think of manufactured products when we speak of this kind of utilities.

When the coal has been changed by labor into a form fitted for human uses, it is still necessary to convey it to those who are to use it. *The utility which a good has by reason of being in a place convenient to the user we call* (3) *place utility.*

Next, this coal, which is made up of elements fitting it for human use, which has had its *form* changed by the miner, and which has now been transported to a *place* convenient for its consumption, is kept until the *time* when it is to be used. *The utility which a good has by reason of its being present at a time convenient to the consumer we call* (4) *time utility.*

Finally, by an act of exchange, the coal passes from the ownership or possession of the dealer to a consumer. *The utility which a thing has by reason of being in the possession of one person rather than of another is called* (5) *possession utility.* This may perhaps be better understood by considering a " swap," an act of simple barter. When two boys swap

jackknives, it is possible for both knives to have greater utility for their new owners than they had before. The new and added utility resulting merely from change of possession is possession utility.

Elementary utility, form utility, place utility, time utility, and possession utility: these, in their logical order, are all the sorts of utility that any material goods ever do or can have. Goods about to be consumed of course have all of these utilities; but in the case of any particular commodity some one utility is likely to be of special importance. Thus, ice in summer has as its most conspicuous utility that of time. In the same way, great place utility is added to tea when it is carried from Japan or Ceylon to the consumer in an American town.

Wealth Consumption. — Man satisfies his wants by the enjoyment of these utilities. In many cases enjoyment of such utilities involves the destruction of the physical goods. But there are other things whose utilities are not destroyed by the user, but by natural forces. In such cases, the destruction is usually gradual and slow. Thus, a house furnishes its utilities to the user over a long period of years. *The direct satisfaction of human wants by the enjoyment of the utilities in goods is called consumption.* When goods afford such direct satisfaction only in a single act of enjoyment, they are called *perishable* goods. Such, for instance, are coal and food. But a house, a book, or a carriage affords satisfaction of human wants in repeated acts of using. To take an extreme instance, land may be made to afford satisfaction of human wants through all time. These are *durable* goods. Defining, we may say that *perishable goods are those that lose their utilities in a single satisfaction of human wants; durable goods are those that afford repeated satisfaction of human wants.*

Productive Consumption. — Earlier economists usually

included under the name consumption a destruction of utilities designed to result in the creation of new and greater utilities. Thus, coal, when used in the engines of a factory, was said to be consumed productively. If we were to call such consumption *productive consumption,* we should have to use some distinguishing word in referring to a destruction of utilities for the *direct* satisfaction of human wants. The expression adopted for this purpose was *final consumption.* But since productive consumption is only a part of the process of production, we may fairly confine the use of the word " consumption " to the final and immediate satisfaction of human wants by the enjoyment of the utilities afforded by goods. What economists once called productive consumption, therefore, we shall call a part of production.

Relation of Consumption to Production. — We must, for scientific reasons, mark somewhere a distinction between consumption and production, although, as appears above, the two often shade into each other. Consumption and production are correlative. Consumption furnishes the motive to production. Production affords materials and services for consumption. Consumption makes production necessary at the same time that it makes production possible. To sum up in a word, consumption is the end and condition of production, and of all economic activity; production is the means of consumption.

SUMMARY

1. Since want satisfaction forms the motive to all economic activity, consumption may properly be made the first division of economic theory.
2. Want satisfiers are called utilities or goods.
3. Free goods are unlimited in quantity and cost us nothing; economic goods require economic activity in their getting and using.

4. There are five sorts of utility: elementary, form, place, time, and possession.
5. Consumption is the use of goods in the direct satisfaction of human wants.
6. Consumption is the end and means of production; production is the means of consumption.

QUESTIONS FOR RECITATION

1. Why is consumption first studied?
2. What is a good or utility? Use each word in two sentences to show the difference between the technical economic use and the non-technical.
3. Give illustrations of free goods; of economic goods.
4. Define elementary utility; form utility; place utility; time utility; possession utility.

QUESTIONS FOR STUDY AND DISCUSSION

1. Is air ever an economic good? Sunshine? Is water ever a free good?
2. Is the farmer the only producer?
3. Is the name consumption to be applied to the use of corn in fattening hogs? Is the wearing out of a suit of clothes by a workman consumption or a part of the process of production? If workers are not consumers, who can be consumers?
4. Give examples of elementary, form, place, time, and possession utilities.
5. Give examples of perishable and of durable goods.

LITERATURE

Devine, E. T.: *Economics*, Ch. V, pp. 73–78.
Fetter, F. A.: *Principles of Economics.*
Patten, S. N.: *The Consumption of Wealth.*

CHAPTER II

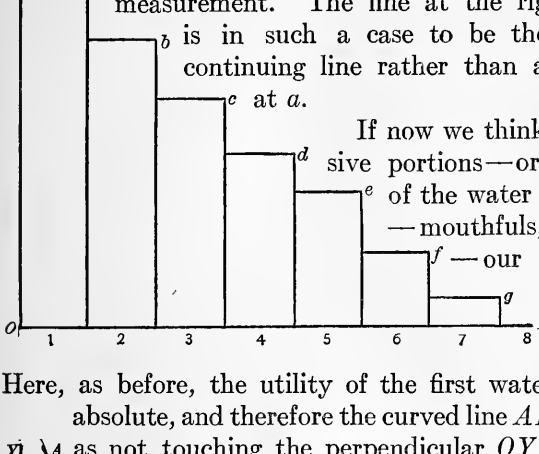
THE LAW OF DIMINISHING UTILITY

Illustrations of the Law. — The wants of men are innumerable and, considered as a whole, are never satisfied. There seems to be no limit to the variety of things desired. But if we single out any one commodity, we find that our desire for it is limited. We have all heard of the king who wanted gold and who got so much that he finally loathed the sight of it. The story of King Midas is but an illustration of what the economists call the *law of diminishing utility* or the *law of satiable demand.* Let us consider the case of a desert traveler, who, having long before exhausted his supply of water, comes upon an oasis with a cooling spring. The first cup of water may save his life, and would therefore have a utility which we may call *absolute.* A second cup may still have a very high degree of utility; but if we suppose him to continue the drinking, we know that the later additions to his satisfaction will gradually grow less and that he cannot proceed without coming to a point where any further consumption will cause not pleasure but pain.

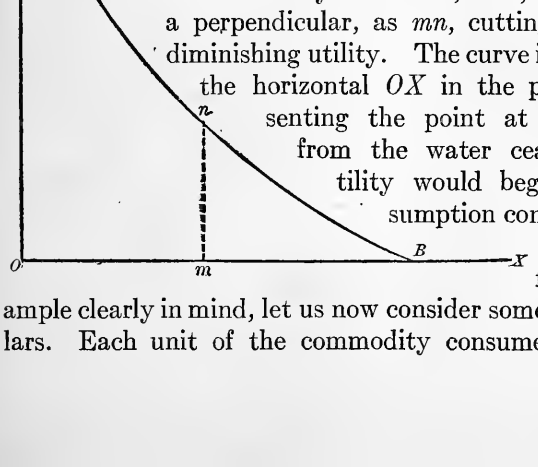
This is illustrated graphically by the figures on page 99.

In the figure, let the equal spaces 1, 2, 3, 4, 5, 6, 7 on the line *OX* represent equal portions of water, and let the perpendicular lines represent the height to which satisfaction rises in drinking the respective portions. Then the parallelograms would represent the total satisfaction derived from

the successive acts of consumption. It will be noticed that the first parallelogram is left open at the top. This is because in the example the utility of the first cup of water, since it saved life, is not susceptible of measurement. The line at the right, therefore, is in such a case to be thought of as a continuing line rather than as terminating at *a*.



If now we think of the successive portions—or increments—of the water as very small, —mouthfuls, for instance, —our figure would have to be drawn as follows:—



Here, as before, the utility of the first water consumed is absolute, and therefore the curved line AB is represented as not touching the perpendicular OY in any point. The different increments consumed are to be thought of as points along the line OX, and the satisfaction derived from any increment, as m, is measured by a perpendicular, as mn, cutting the curve of diminishing utility. The curve in this case cuts the horizontal OX in the point B, representing the point at which utility from the water ceases, and disutility would begin should consumption continue.

With the figures and example clearly in mind, let us now consider some of the particulars. Each unit of the commodity consumed is called an

increment of supply or an increment of consumption. The utility of the first unit, which in this case is absolute, is called the *initial* utility. If the stock be thought of as cut off at any point along the *OX* axis, *the utility of the last unit is the marginal utility.* Thus *mn* measures the marginal utility of stock *Om.* As consumption or stock increases along *OX,* marginal utility falls. Thus from the point of view of progressive acquisition or consumption of any good, we may define marginal utility as the *utility of the last unit acquired or consumed.* Instead of the term marginal utility, some writers use the term *final utility,* and others, *effective utility.*

The total utility is the sum of the utilities of all the units of the stock. Note well, however, that the total utility is not the marginal utility multiplied by the number of units. It should rather be thought of as equal to the suffering or inconvenience that would be caused by withdrawing all the units one after the other. Precisely because of the facts summed up in the law of diminishing utility, total utility is always much greater than the marginal utility multiplied by the number of units.

But the law we are studying is of wider application than to the mere case of consumption. It applies as well to possession. Whenever we have a stock of any commodity, we impute a utility to the commodity, even when we are not actually consuming it. The law applies therefore to the utility of the commodity whether we are consuming it or are retaining the power to consume it at some future time. Note, however, that in the case of possession, as compared with actual consumption, *the marginal utility of any given stock will be the utility of any unit or increment of that particular stock,* since the units or increments are to be regarded as physically indistinguishable. Thus the utility of any ton of

coal in my cellar is the same as that of any other ton *in the same stock;* but the utility of a ton in a stock of five tons is in any given circumstances greater than the utility of a ton in a stock of six tons or ten tons.

Formal Statement of the Law. — We are now prepared for a formal statement of the important economic law of diminishing utility. It is as follows: *At any given time the marginal utility of any commodity to its owner decreases with every increase in the stock possessed or consumed.*

Limitation. — Notice that this statement of the law contains the qualification *at any given time.* The importance of this qualification becomes evident when we return to a consideration of our illustration. We know that when the utility of water has fallen to zero, it needs not long to wait before the satisfaction to be derived from consumption again becomes keen. With the consumption or possession of some things, the importance of the qualification becomes even greater. A boy finds that any clothing beyond a very small amount has a low added utility for him. But as he grows into young manhood, his wants change so far that a much larger supply of clothes has as great a marginal utility as his slender stock had before. Whenever different times are considered, therefore, we must make complete allowance for the change of wants in the interval.

The Case of Money. — With this in mind, we may say that the law of diminishing utility applies to money as to all other goods, although the rate of diminishing utility is much slower, because money represents general purchasing power and permits variety in consumption. With variety in consumption, as we all know from experience, satiety is reached more slowly than without it. Nevertheless, at any given time, the hundredth dollar of one's stock has a lower utility than the ninety-ninth or any other preceding

one. Thus it follows that to a rich man, *other things being equal,* money has a less marginal utility than to a poor man.

SUMMARY

1. The law of diminishing utility explains how increasing a stock of goods means decreasing the utility per unit of the stock.
2. Initial utility is the utility of the first unit; marginal utility, the utility of the last unit, the stock being thought of as gradually increasing.
3. The law of diminishing utility applies unqualifiedly only at a particular moment of time.
4. The law of diminishing utility applies to money as to other commodities.

QUESTIONS FOR RECITATION

1. How great is the marginal utility of air under ordinary circumstances? Why?
2. How does the law of diminishing utility apply when the consumption of commodities is carried beyond the point of zero utility? Illustrate by diagram.
3. Give illustrations of the importance of the qualifying phrase "at any given time."
4. What significance has the law as bearing upon the comparative condition of the rich and the poor?

QUESTIONS FOR STUDY AND DISCUSSION

1. Does the marginal utility of all commodities decrease at the same rate? Does the marginal utility of any commodity decrease at the same rate for all persons? Give illustrations and draw diagrams to represent differences.
2. Is the marginal utility of a dollar necessarily less for any particular rich man than for any particular poor man?
3. Distinguish between flowers and weeds in terms of the law of diminishing utility. Draw to represent the distinction.
4. Can you think of any tales or proverbs that illustrate the significance of the law of diminishing utility?

LITERATURE

See preceding chapter. Also:
Clark, J. B.: *Distribution of Wealth*, Ch. XIV, pp. 209–213.
Cunyinghame, H. H.: *Geometrical Political Economy.*
Devine, E. T.: *Economics*, Ch. V, pp. 86–92.
Marshall, A.: *Principles of Economics*, Bk. III, Ch. III, §§ 1–4.

CHAPTER III

DEMAND

The Economic Order of Consumption. — It follows from the law of diminishing utility that men in satisfying their wants consume commodities in a fairly regular order. So far as they consume things to the best advantage, their consumption is based upon a balancing of these two considerations, — the *utility of the goods, and the cost of procuring them.* Therefore, in deciding what wants they will first satisfy, *they will choose those commodities which promise the greatest surplus of utility over cost.*

To make this clearer let us take a detailed example. Suppose a boy with twenty-five cents to spend standing before a booth at a fair, and bent on satisfying a want for goods there displayed. If peanuts are five cents a pint, it may be that his liking for them will be great enough to cause him to make a pint of them his first purchase. But he knows that a second pint will satisfy a want less keen than is satisfied by the first. We may imagine him, then, spending his second nickel on popcorn. In the same way, it may be, a first glass of lemonade will give him greater enjoyment than would a second pint of peanuts or a second bag of popcorn. It is possible that he has no strong desire for the other goods displayed, and that he can get greater satisfaction from a second pint of peanuts than from anything else that he could purchase, although they will afford less enjoyment than he derives from either the popcorn or the lemonade he has bought. Again, it is quite possible that he will like a second glass of lemonade better than a third pint of peanuts or even a second bag of popcorn, because the action of the law of diminishing utility is more rapid in his consumption

of popcorn than in his consumption of lemonade. Now the boy has purchased with his five nickels two pints of peanuts, one bag of popcorn, and two glasses of lemonade. The case is the same whether he buys them all at the same time or distributes his purchases throughout an afternoon. He makes his purchases according to his judgment as to their varying utility in such a way that he will receive the maximum enjoyment from his expenditure.

Illustration by Diagram. — Let us illustrate this as before by a diagram:

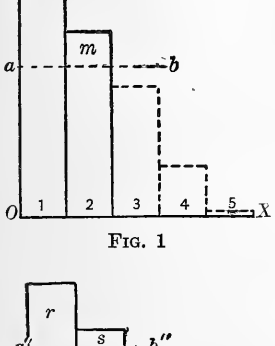


FIG. 1

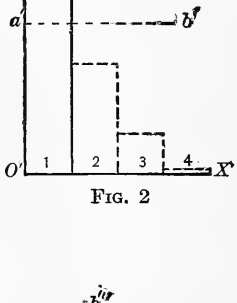


FIG. 2

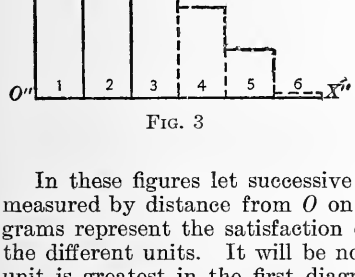


FIG. 3

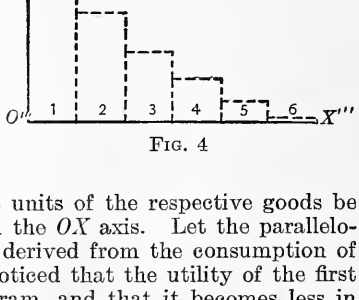


FIG. 4

In these figures let successive units of the respective goods be measured by distance from *O* on the *OX* axis. Let the parallelograms represent the satisfaction derived from the consumption of the different units. It will be noticed that the utility of the first unit is greatest in the first diagram, and that it becomes less in each succeeding figure, but that the utility diminishes more slowly in Figure 3 than in Figure 2. Now let the price of each unit be

measured by the distance between *OX* and *ab* in each figure, since this is the same in all cases. In the diagrams it is evident that purchase will first be made of the commodity represented in Figure 1, since the surplus of satisfaction over cost is greatest in that case, this surplus being measured by the parallelogram *az*, which is larger than any of the corresponding parallelograms *m*, *n*, *r*, *s*. The parallelogram *n*, which represents the surplus of utility over cost of the first unit of the second commodity, — in our illustration, popcorn, — is greater than the parallelogram *m*, which represents the surplus of utility from a second unit of the first commodity, and is also greater than the parallelogram *r*, which represents the surplus utility from a first unit of the third commodity, — in this case, lemonade. It will, therefore, represent the second purchase. In the same way *r*, being next in size, represents the third purchase; *m*, the fourth; and *s*, the fifth. Notice that while the first unit of the second commodity affords a surplus, the second does not. Again, notice Figure 4, which represents some commodity that the boy is not tempted to purchase with the stock of money in his possession.

It will be interesting and valuable practice for the student to vary these figures to represent different suppositions regarding consumption, and to carry the process one step farther by supposing the units of the commodity to be so small that the diminishing utility will be represented by a curved line instead of by the broken lines that form the top and part of the right side of the parallelograms in our illustration. Another variation might well be to have the costs vary from commodity to commodity.

We are now prepared for a formal statement of *the law of the economic order of consumption*. So far as commodities are purchased and consumed rationally and economically, *choice is in every case determined by the amount of the surplus of utility over cost.*

The Law of Substitution, Indifference, or Equi-Marginal Return. — To this law there is a corollary, which is also the application to the field of consumption of the more general economic law variously known as the *law of substitution, of indifference,* or of *equi-marginal returns*. As applied to consumption this law is that *choice is determined by the desire to*

make marginal utilities equal in all fields of consumption, reckoning these marginal utilities with respect to a common unit of expenditure. Some goods, to be sure, are of such a character as to make any nice balancing of satisfaction difficult or impossible. There is so great a difference in the price of cameras and automobiles that I may satisfy my want for the one much more fully than my want for the other; though even in this case it must be remembered that I can achieve a certain satisfaction of my want for automobiles without buying one outright. But in the case of most sorts of goods it is possible to buy greater or smaller quantities at will and at corresponding gradation of expenditure. And in the case of such goods it is obvious that rational expenditure will be so adjusted as to make the marginal utilities equal in all lines of consumption.

How Economic Importance is determined. — Each consumer estimates the economic importance of any commodity, not upon the basis of its total utility, but upon the basis of its marginal utility. In other words, its importance is measured, not by the total amount of inconvenience or suffering that would result from entire deprivation of the given stock, but by the keenness of the desire or want that he would feel if deprived of any portion of the stock. If I were where I could not make any purchases of goods, nor add to my stock in any way for a considerable time, and if I had in addition to other goods fifty barrels of flour and only three pounds of sugar, I should probably husband the sugar more carefully than the flour. In other words, I should calculate that with the existing stocks a pound of sugar had a greater economic importance for me than a pound of flour. If, however, instead of the greater quantity of flour, I had so little that ordinary consumption would use it up before the stock could be replenished, I should attach the greater

economic importance to the flour instead of to the sugar. In either case my reason would be the same. In the first case sugar would have a greater marginal utility than flour, because diminution in its supply would leave me with an unsatisfied want keener than would follow from an equal diminution in the stock of flour. But in the second case the flour would have the greater marginal utility, since a decrease in its supply would involve actual hunger before the stock could be replenished.

It is instructive to compare the relation between the marginal utilities of two commodities with the relation between their total utilities. Thus, a pound of gold has a greater economic importance than a pound of iron, though the world would probably suffer more from the loss of all its iron than from the loss of all its gold. The same contrast is much more certainly and obviously true of diamonds and coal.

The Laws of Demand

We have already explained that the study of human wants is directly connected with the study of consumption, and that the study of consumption leads to the study of demand. But we must note that a want for anything is not the same thing as a demand for it. "If wishes were horses, then beggars might ride." In order that there may be a demand for a thing, there must be not only a desire for it, but also the willingness and the ability to offer for it some sacrifice. In other words, to speak in the language of everyday life, we must not simply want the thing, but we must want it enough to pay for it. It must be remembered, therefore, that in economics, *demand means desire backed up by means or purchasing power.*

But in addition to this definition of the real meaning of

the word " demand " in economics, we need a definite way of measuring its intensity. Such a method of measurement is found in *the number of units of any commodity which will be purchased at a given price.* If a table be constructed of the different quantities of a commodity which would be purchased at different prices at any given time, such a table will describe what economists speak of as the *state of demand* for the commodity. If to-day the people of a certain community are willing to buy

100 bushels of apples at $2.00 per bushel,
300 " " " " $1.00 " " ,
500 " " " " $0.75 " " ,

this list or table, we say, shows the present state of demand for apples in the community.

The demand for a commodity is said to increase, and can only then properly be said to increase, *when the quantity that will be taken at a given price increases.* There is perhaps no more frequent mistake in economic reasoning than that of assuming that *demand* for a commodity has increased or decreased because the commodity is actually selling at a higher or lower price than before. When the price rises, it may indeed be because of an increase of demand for the same quantity or *flow* of the commodity; but on the other hand it may be because, with no change in demand, the quantity on the market, or the flow of commodity into the market, has lessened. From this it follows that there is a difference between *demand* and *quantity demanded.*

It is usual in treatises on economics to include a statement of the law or laws of demand, substantially as they are given below. Strictly speaking, however, only the first and third are laws of demand, the second being rather a law of the quantity demanded, as has been explained above.

1. *The Quantity Demanded Varies Directly with the Marginal Utility.* — Suppose, in the first place, that the price of a certain quality of tea remains during a certain period at fifty cents the pound, and that during the same period the wealth of the consumers also remains the same. Then it is evident that if the public taste for any reason changes in such a way that the marginal utility of any amount or flow of tea becomes less or greater, the demand will fall off or increase to correspond. Note, however, that the change in demand is not necessarily, or even usually, exactly proportioned to the change in marginal utility.

2. *The Quantity Demanded Varies Inversely with the Price.* —Again, suppose that the wealth of consumers remains the same, and that there is no change in the marginal utility of any quantity or flow of the commodity. Then it is evident that the amount taken will be greater when the price is low and smaller when the price rises. The relation between price changes and resulting changes in quantity demanded varies with different commodities. Thus, in the consumption of wheat, for instance, while it makes a difference in the quantity taken whether the price stands at fifty cents or at a dollar a bushel, the difference is not so great as in the case of articles that satisfy less urgent wants. On the other hand, a fall in the price of certain articles, especially luxuries, is promptly followed by a great increase in the quantity taken from the market.

The extent to which changes in price are attended by changes in quantity taken is known as the elasticity of demand. Thus, when a relatively slight fall in price results in a relatively great increase in the quantity taken, demand is said to be highly elastic. The unit, or standard, of elasticity is represented by that condition in which the product of quantity taken multiplied by the price per unit remains constant for different quantities and prices. The following table will illustrate: —

Price per Unit	No. Units Taken	Total Sales
$2.00	200	$400
1.00	400	400
.50	800	400
.25	1600	400

When the product of quantity taken and price increases with a fall in price, the demand is said to be elastic; when the product decreases, the demand is said to be inelastic. Otherwise defined, *the unit of elasticity is that degree of elasticity in which any change in price is attended by a precisely equal proportionate but inverse change in the quantity taken, and vice versa.*

3. *The Quantity Demanded Varies Directly with the General Wealth or Purchasing Power.* — In the third place, if we suppose the marginal utility of any commodity and its price to remain the same, it is evident that anything which increases the purchasing power of the community will increase its demand for the commodity. For increase of wealth, as has been explained, lowers the marginal utility of money, and makes it possible to spend more for other commodities without losing that surplus of utility over cost which determines purchases. Here again, however, it is to be noted that the change in purchasing power and the resulting change in demand are not of necessity equal in degree.

The three general statements or laws just given and explained may be summed up as follows: (1) *Demand for any commodity varies directly, but not necessarily in proportion,* (a) *with the marginal utility of the commodity, and* (b) *with the purchasing power of the community; and* (2) *the quantity taken from the market varies inversely, but not necessarily in proportion, with the price.*

Engel's Law of Family Expenditure. — Further light is thrown on the principles which we have been studying by the actual facts regarding the expenditures and consumption of families. A detailed statement of the income and outgo of a family is called a family *budget*. Careful studies of such budgets have been made in Saxony and Great Britain and in some of our own states, notably Massachusetts and Illinois. On the basis of the German statistics, the table of percentages on the following page has been prepared.

PERCENTAGES OF FAMILY EXPENDITURE. SAXONY

ITEMS OF EXPENDITURE	PERCENTAGE OF THE EXPENDITURE OF THE FAMILY OF					
	A workingman with an income of from $225 to $300 a year.		A man of the intermediate class ("Mittelstandes") with an income of from $450 to $600 a year.		A person in easy circumstances ("des Wohlstandes") with an income of from $750 to $1100 a year.	
	Per cent		*Per cent*		*Per cent*	
1. Subsistence	62.0	95.0	55.0	90.0	50.0	85.0
2. Clothing	16.0		18.0		18.0	
3. Lodging	12.0		12.0		12.0	
4. Firing and lighting	5.0		5.0		5.0	
5. Education, public worship, etc.	2.0	5.0	3.5	10.0	5.5	15.0
6. Legal protection	1.0		2.0		3.0	
7. Care of health	1.0		2.0		3.0	
8. Comfort, mental and bodily recreation	1.0		2.5		3.5	
Total	100.0		100.0		100.0	

The following table permits a comparison between the conditions obtaining in different countries: —

COMPARATIVE PERCENTAGES OF EXPENDITURES BY THE FAMILIES OF WORKINGMEN IN ILLINOIS, MASSACHUSETTS, GREAT BRITAIN, AND SAXONY

ITEMS OF EXPENDITURE	ILLINOIS	MASSACHUSETTS	GREAT BRITAIN	SAXONY	AVERAGE
Subsistence . .	41.38	49.28	51.36	55.00	49.25
Clothing . . .	21.00	15.95	18.12	18.00	18.27
Rent	17.42	19.74	13.48	12.00	15.66
Fuel	5.63	4.30	3.50	5.00	4.61
Sundries . . .	14.57	10.73	13.54	10.00	12.21
Total . . .	100.00	100.00	100.00	100.00	100.00

As a result of his study of Saxon family budgets, as already given, Dr. Ernst Engel, an eminent statistician, laid down the following general *law of family expenditure, or domestic consumption.*

As the income of a family increases,

(1) *The percentage of expenditure for food decreases;*

(2) *The percentage of expenditure for clothing remains approximately the same;*

(3) *The percentage of expenditure for rent, fuel, and light is invariable;*

(4) *The percentage of expenditure for education, health, recreation, etc., increases.*

From the figures given in the tables it is evident that the demand for food in any community has comparatively little elasticity, since enough for subsistence is required in any case, and the relative amount demanded by all classes falls off rapidly as these needs are satisfied. On the other hand, increased wealth results in an increasing demand for all the manifold goods and services that minister to cultural wants.

Since the satisfaction of man's higher wants is necessary

to his complete efficiency as a producer, we can understand from the tables how it is that "the destruction of the poor is their poverty." They live in a vicious circle. The poverty to which they are born is itself the bar to their escape. Once free them from this condition, and the power to perpetuate their own prosperity is given into their hands; for they thus become more efficient as producers and more skillful in securing a just share in the increased product of their labor.

Engel's law is also of great value in illustrating the unfair social distribution of the burden imposed by ignorant or intentionally vicious tax laws. It is clear that a tax, say of one dollar a barrel on flour, however laid, is bound to throw an entirely disproportionate load upon the shoulders of the poor. Yet a consideration of existing systems of taxation can leave no one in doubt that such taxation is frequently the rule.

SUMMARY

1. Men seek in their consumption to secure the greatest possible surplus of utility over cost, and to maintain an equality of marginal utilities in their different lines of expenditure.
2. The economic importance of a commodity is determined by its marginal utility.
3. Demand varies directly with marginal utility and with the wealth of the consumer: the quantity demanded varies inversely with the price.
4. Increase of income means increased opportunity for expenditure on the comforts and decencies of life.

QUESTIONS FOR RECITATION

1. Draw diagrams roughly representing the initial utility and the diminishing utility of some different kinds of consumption in your own case.
2. Which has the greater economic importance for men, water or gold? Water or wheat? Contrast other commodities in the same way.

3. State the law or laws of demand. Give illustrations.
4. State Engel's law of domestic expenditure. What is the bearing of the law on the condition of the poor? on taxation?

QUESTIONS FOR STUDY AND DISCUSSION

1. In what terms do we estimate marginal utilities in everyday life?
2. What would be the relative effect upon demand for automobiles and wheat if the prices of both should fall proportionally? Why has the price of copper remained high in spite of the great increase in its supply? How does the sudden death of a President affect the demand for mourning goods? Why?
3. What percentages of their incomes do different persons in your community spend for the different kinds of things mentioned in Engel's law?
4. Prepare tables of demand to show elasticity of more than unity; of less than unity; of unity.

LITERATURE

See preceding chapters. Also, on Engel's law:—

Roscher, W.: *Principles of Political Economy* (Translation), Vol. I, Ch. I, §§ 1–6.

Rowntree, B. S.: *Poverty: a Study of Town Life.*

The English Board of Trade Reports on the Cost of Living in England, France, and Germany.

The Seventh Annual Report of the United States Commissioner of Labor gives the results of other investigations.

CHAPTER IV

THE ECONOMY OF SPENDING AND SAVING

Two important questions regarding economy in consumption remain to be studied. The first question is, briefly, (1) *How can one's whole expenditure or consumption be so distributed between the present and the future that the greatest amount of satisfaction will result?* The second question assumes that the first has been answered, and asks (2) *how the consumption of the present may be so ordered that it will result in the greatest total of satisfaction.* Though both questions really have to do with expenditure, still we commonly think of the first as the problem of *saving,* as distinguished from the problem of *spending,* which is represented in the second question.

I. The Economy of Saving

First of all it should be noted that the proportion between present and future expenditure conforms to the general rule which has already been laid down as the law of the "economic order of consumption." We seek always in our expenditure to secure the greatest surplus of utility over cost; hence we discontinue present expenditure when we feel that we can secure a greater surplus of utility by applying any remainder of our purchasing power to future purchases. Of course, with many people the demands of the present are so

urgent and their means so limited that there is little opportunity for any such balancing of present and future surpluses. But whenever there is any saving at all, it proceeds according to the mental comparison just explained.

1. **Hoarding.** — But how are goods saved? Manifestly, we may save goods in such a way that neither we ourselves nor others can enjoy them in the present. The peasants of some countries are so distrustful of banks that they lay by or *hoard* their savings in secret places about their homes. Such saving, though it is not the best, is better than harmful or luxurious consumption in the present; for if the good, for instance, money, be stored away in such a manner that it will not suffer harm, it may in the end minister to real and commendable wants.

2. **Investment.** — But in modern times, with security of property guaranteed by a strong government, and with easy opportunities for devoting savings to productive uses that will return a regular income, most provident people prefer saving by *investment* to saving by hoarding. *Such investment may be* (a) *directly made* in business or in income-producing property. But as industry becomes more complicated and requires more and more skill for successful management, a greater number of people prefer to (b) *invest indirectly, i.e.,* to *intrust their savings to the hands of others* rather than to invest them directly. The process is even carried one step farther in the majority of cases. Instead of lending their savings directly to those who manage productive enterprises, (c) *men deposit their savings,* in the form of money or credit instruments, *in banks,* and the banks in turn take it upon themselves to decide in what enterprises such savings may be most safely and profitably invested.

The difference between hoarding and saving by investment is, briefly, that in the one case the goods *may ultimately* be

used productively and economically, while in the other case the goods saved *are saved by being used thus productively.*

The Real Nature of Saving. — The fact that money represents goods in general is likely to cause us to overlook the real nature of saving. *From the individual point of view, saving means the postponement of consumption.* When a man saves five dollars out of his week's income, he is postponing to a future time the exercise of his right to receive goods to that amount from his fellows. He may do this either by hoarding the money or by lending it to someone else. But such acts do not necessarily result in saving from the *social* point of view. *Social saving means greater power of enjoyment in the future on the part of the community as a whole.* If A lends to B money which B at once wastes, A individually has saved, but there has been no social saving, for there will not be more goods to enjoy in the future on account of this act. But if, instead of wasting the amount borrowed, B had paid it out for the making of a machine, there would also have been social saving, since the machine would make it possible to produce more goods in the future. Modern societies save chiefly by bettering their facilities for producing goods; the amount of food, clothing, etc., that the people of the United States store up for future use is comparatively small.

The Make-work Fallacy. — We often hear men talking as if the man who spends money freely were a public benefactor, while the man who is not thus lavish is to be regarded with reproach. But it is plain from the foregoing that the former is using up goods and services now, while the latter may through his investments be improving the productive equipment of society. The one is telling men to serve him in his home, in his stables, and aboard his yacht; the other is setting them to work building factories, — he is saving

socially. It is true, this may in its turn be pushed too far. We may make the mistake of spending all our time and effort in getting ready to live at some future day, when it would be wiser and better to spend some thought upon actual living. But perhaps neither individuals nor nations need such a warning.

"Spending money to make trade good" is thus seen to be fallacious.

II. The Economy of Spending

Having considered the first of the two questions which were raised at the beginning of this chapter, we have next to consider the other, — the question of how to order one's present consumption that the greatest good may result.

First of all, for economy in spending, two things are essential, which we may call (A) *the economy of right choice*, and (B) *the economy of right use*. The economy of *right choice depends upon a correct knowledge of those present uses to which commodities may be most advantageously applied*, while the economy of *right use depends upon a knowledge of the most efficient means of applying the goods to those uses.*

(*A*) **The Economy of Right Choice.** — In considering the question of how economy may be secured through right choice, we enter into a field of thought that forms the borderland between ethics and economics. First of all, we are probably safe in asserting that *from the point of view of society as a whole, economy requires that the results of social effort should, in the highest practicable degree, be distributed among the individuals in society.* When many toil and go without the mere decencies of life in order that a few may be lapped in luxury without toil or care, it is evident that a fundamental rule of social economy is violated. Without discussing here

how far such a condition may be prevented, we may all agree that it does not represent an ideal of economy for a democratic society.

The Waste of Luxury. — Expenditure for luxuries, or luxurious consumption, is not economical consumption, because it does not adapt resources to their most advantageous uses. The subject of luxury is a difficult one to discuss, since a definition of the thing itself is by no means easy. Many things are to-day easily obtainable by the poorest which two centuries ago could be enjoyed only by the most wealthy and powerful. Such things are never thought of as luxuries in modern days, but if their possession in the olden time required the exploitation of the poor and did not render their possessors able and willing to confer great social service in return, we must hold that they were then luxuries. To the illiterate man, a library is a luxury; to the scientist, it may be a necessity for complete efficiency. These illustrations may serve to show the difficulty of reaching any simple and clear definition of luxury, and the equally great difficulty of establishing any universal principles by which we may always judge such expenditure. Yet it is possible to lay down a definition which at the same time implies a principle of social economy in expenditure and suggests an ethical precept: *Luxury consists in any consumption of commodities and services which is seriously out of proportion to the service that it enables the consumer to return to society, but which is not of necessity directly injurious to the consumer.*

But, it may be asked, has not a man the right to do as he will with his own? And the answer must be, Yes, in a very full measure, if you judge right solely by the statute law. No court had appointed Cain to the guardianship of Abel. But the statute law follows only slowly and haltingly after the growing sense of right and duty as it develops in the

race. The laws have often granted extreme rights of property and use, because it has been believed that on the whole men have worked harder, produced more, and been happier, when they were given such almost unfettered rights of disposing of their product. Now, however, men are becoming more socially inclined. More and more, rich and talented men are coming to regard their riches and their talents as trusts that have been committed to them, rather than as possessions that they may squander without a thought for their fellows. As this feeling of responsibility, of stewardship, becomes developed, our law is changing to recognize the change in the idea, and, so far as may be, to compel the unsocial to feign the virtue if they have it not. Indeed, save in exceptional instances, there may be no need for a change in the law, since public opinion would be sufficiently powerful to accomplish the purpose of checking lavish display.

But we must revert to our caution. Too great penuriousness is an evil only less serious than prodigality. We must not forget that a rational expansion in the number and variety of human wants is necessary to human progress.

The Waste of Harmful Consumption. — In speaking of luxurious consumption, we have said that it does not necessarily involve immediate and direct harm to the consumer himself. When such harm does result, it is more usual to speak of the consumption as harmful rather than as luxurious. It goes without saying that harmful consumption calls for the censure of the economist no less than for that of the ethical teacher, since it is in the highest degree wasteful, whether regarded from the point of view of the individual or of society. *When a nation devotes a large amount of its labor and capital to the production of commodities which, in their consumption, cause more misery than happiness, and weaken*

the nation's future resources of energy and intelligence, there is a departure from economical consumption so serious as to call for the severest condemnation. If society would forego such injurious consumption, bread would be cheaper, higher wants would find satisfaction, and man would be working away from the beast's low level of mere sensual gratification.

Some Rules for Economy in Choices. — We may exercise an influence over the growth of our own wants in such a way that a great real satisfaction may flow from a comparatively small expenditure. Thus (1) *we should cultivate enjoyment or consumption that is inclusive* (*or inexclusive*) *rather than exclusive in its nature.* It is evident that if a community can cultivate such a love for art that its satisfaction will consist in viewing beautiful pictures or statues rather than in owning them individually, it will be possible to secure such satisfaction by joint purchase most economically. Again, (2) *we should cultivate harmonious consumption.* We all know, to take a homely example, that bread and butter together give a greater enjoyment than would result from the consumption of the two separately. But harmony of consumption is by no means limited to such simple cases as this. *Whenever a group of commodities produces in combination a greater satisfaction than results from the consumption of the same commodities separately, the consumption of the group is harmonious consumption, and is most economical.* Finally, (3) *we should cultivate variety in consumption. The greater the variety of goods consumed, the higher will be the marginal utility of the goods, and hence the keener the satisfaction in their consumption.* Moreover, the wider the range of a man's likings, the more certain is he to find satisfaction under widely varying conditions, as when traveling among strangers. To take a simple instance, a family with little variety of taste or desire in the matter of food is at the mercy of price

changes within that limited range of food purchase, while those who have cultivated varied tastes are able to give up the consumption of any one form of food, when it becomes expensive, without great loss of enjoyment. If the American people would cultivate a taste for other kinds of bread than that made from wheaten flour, they could get their satisfaction from the other kinds of bread as well as from the wheaten bread itself more cheaply than they now do.

(*B*) **The Economy of Right Use.** — Hitherto, we have been speaking of a lack of economy due to the failure to choose the right commodities or to appropriate those chosen to their most advantageous uses. But even when they are so applied, there is generally some waste in the method of using them. It is even probable that more waste arises in this way than in the other, though the harm to character is, of course, incalculably less.

The Economic Importance of Housekeeping. — It is here that the great influence of the wife and mother can be seen. Probably not less than three-fourths of the income of the average family depends, for the economy of its expenditure, upon the woman to whom the affairs of the household are intrusted. The importance of this consideration has often been overlooked. Americans, in particular, have incurred the reproach of wasteful methods in providing food for the family. Such waste may result (1) from *the choice of foods that contain relatively little nutriment;* (2) from *the choice of foods not well suited to the particular needs of the consumers;* (3) from *failure to utilize all the material* that is purchased and that would supply nutriment; (4) from *bad preparation* of the food; (5) from *failure to utilize to the full the fuel* devoted to cooking. Similar wastes are repeated in the matter of clothing. It has been calculated by careful investigators, that through these channels there is a waste in the ordinary

family income of over one-tenth of the total. If the calculation be correct, we may conclude that a stoppage of these wastes would enable the average family to secure its present enjoyments with a working day shortened by an hour, or to increase the sum of their enjoyments by more than a tenth without any increase in the amount of work required.

SUMMARY

1. Economy in consumption requires an economical balancing of expenditures between the present and the future, and an economical ordering of present expenditure: the one is the economy of "saving"; the other, the economy of "spending."
2. Saving, unless it is merely hoarding, is really spending for the future. Therefore, a wise balancing of present and future is secured by the mean between prodigality and parsimony. The prodigal is not a public benefactor.
3. Economy in present consumption requires right choices and right uses of the things chosen.
4. Luxury and harmful consumption both violate the rule of right choices and are uneconomical. Inclusive, harmonious, and varied consumption is most economical.
5. The economy of right uses depends largely upon the home maker.

QUESTIONS FOR RECITATION

1. Discuss the fallacy: "Spending money makes trade good." Why and how does the man who saves spend? Through what agency is this spending for the future usually done in modern society?
2. What two general principles must be observed in economizing on present expenditure?
3. What is luxury? What are its economic effects? How does it differ from harmful consumption?
4. Explain by illustrations the economy of variety in consumption; of harmonious consumption; of inclusive consumption.

QUESTIONS FOR STUDY AND DISCUSSION

1. Why is a public library economical?
2. What is meant by the statement that "saving is spending"? that "saving is spending for future goods"?

3. What would be the result if all men spent their income only for what they regarded as sheer necessities?
4. Can a poor man save, *i.e.* spend for future goods, otherwise than by putting money in a savings bank, or by what is usually called investment? What of expenditure for increase of efficiency of himself or his children? Can saving be carried too far?
5. Use the marginal utility theory to show possible social gain from more nearly equal distribution of social income among men.

LITERATURE

See preceding chapters. Also: —
Atwater, W. O.: "Food Waste in American Households" (article in *Forum* for September, 1893).
Ely, R. T.: *Property and Contract*, Book I, Ch. VI.
Hamilton, J. H.: *Savings and Savings Institutions*, pp. 31–38.
Patten, S. N.: *Dynamic Economics*, pp. 39–49.

PART II. PRODUCTION

CHAPTER I

INTRODUCTORY

Why Production should be studied next. — We have made human wants, consumption, and demand the first subjects of our study of economic theory because it is from these that all other economic phenomena take their rise. We have seen why men exert themselves in the work of production. The next logical step is to inquire how men go about the work of production. We have studied the cause and the laws of demand. We have next to make a similar inquiry regarding supply. Our present study therefore is of the general subject of production.

What Production is. — Just as consumption means the destruction, not of matter, but of the particular utilities of certain forms of matter, so *production means the creation, not of matter, but of utilities.* Man cannot create matter. Neither the farmer nor the merchant adds one atom to the existing material of the earth. Yet both are called producers, and properly so. What, then, do they produce? If one thinks about it, one will discover that they are producing utilities and nothing else. And how do they do this? Simply by putting things in places appropriate to that purpose. "This one operation," says John Stuart Mill, "of putting things into fit places for being acted upon by their own internal forces, and by those residing in other natural objects, is all that man does or can do with matter."

All Production essentially the same. — It has seemed to some, even among economists of an earlier time, that the farmer is more truly a producer than the manufacturer, and the manufacturer than the merchant; but careful thought discloses the fallacy of such a view. All industrial classes alike produce one or more of the sorts of utility which we have described, and they do so by changing the relations of things in time or space. The farmer changes the position of grains of corn by dropping them into the earth. Then he removes weeds and throws earth about the rising stalks. Thus man's acts in changing the relations and position of things, aided by nature's materials and forces, result in more corn for human consumption. The manufacturer in the same way changes the position of pieces of matter, and, aided by natural forces within and without the object of production, he causes matter to assume a form which fits it, or better fits it, for human needs. So, too, the merchant changes the places of things from where they are less useful to where they are more useful, or holds them in one place until a change of external circumstances gives them a greater time utility. He is producing utilities as truly as is the farmer or the manufacturer. Of course it is possible that the utilities actually produced by merchants could be produced with a smaller expenditure of economic force than is the case at present, and that saving could be effected by a better organization of the work of production. Again, it may be that the merchant may now and then secure a larger return for the production of a given quantity of utility than does the farmer. But all this affords no justification for the popular impression that his work is really less productive in its nature than is that of any other industrial class. The only difference is in the sort of utility that the different classes are engaged in producing. Finally, it must be re-

membered that in the same way the physician, the teacher, and all others who are engaged in rendering personal services, are creating utilities, and are therefore producers.

Production, then, we may define as *the creation of utilities by the application of man's mental and physical powers to the physical universe, which furnishes materials and forces.*

We have already defined goods and economic goods. It remains for us here to call attention to the fact that those quantities of utility that result from labor are economic goods, but that not all economic goods are to the same extent the result of labor. One may pick up a diamond or a nugget of gold upon which one has stumbled: in such a case it can hardly be said that the economic good is the result of labor at all. But even in such rare cases it must be remembered that while the one diamond or the one nugget may have required no labor in getting, yet the whole stock of such goods is the result of toil and suffering and privation for which the value of our diamonds and gold, it is frequently said, does not represent anything like a proper recompense.

Yet there are clearly marked cases of *value creation* that are not *wealth production.* For example, the land on which New York and Chicago stand could once have been purchased for a very small sum of money. The great value which that land now has is to a considerable degree the result of human labor, but much of it is due to the great increase in population, which of itself represents no idea of labor. Such value is a product of social aggregation, not of individual effort. The question of the expediency of allowing individuals to appropriate the rent of land, one of the individually *unearned increments* of value, will be discussed later. Here it concerns us only to notice that such unearned increments exist; in other words, that there is such a thing in the world

as value creation which is not at the same time wealth production.

Individual and Social Wealth. — This distinction between the individual and the social points of view runs throughout economics, and it is particularly important in the case of the concept of wealth or economic goods. What is wealth to the individual may not be wealth to society, and, on the other hand, what is wealth to society may not be within the ownership of an individual. Thus a mortgage is wealth to the individual who holds it, but it is not a part of social wealth, since if the claim for which it stands is extinguished, society is neither richer nor poorer. The case is the same with bonds issued by a city, a state, or a nation. To mark this distinction, such things as mortgages, notes, bonds, etc., are sometimes called "*representative goods.*" From the point of view of society they are not wealth, but legally enforceable claims upon wealth, or symbols of the part ownership of wealth.

Productive Elements often overlooked. — There are many important facts regarding production which are often overlooked. Thus we are likely to forget that even to-day a large part of production is household production, and is not designed for the market place at all.

Again, we are likely to overlook the fact that in the rural districts, where one-third of the population of the United States lives and works, there is annually produced a vast amount of goods which are destined not for the market but for home consumption. Vegetables, small fruits, — cultivated and wild, — butter, eggs, meat, fish caught in public waters, and game are some of the things that may serve as illustrations.

Considerations of this character show the great need of caution in attempting to compare the annual production of

one country with that of another, or to compare the annual production of the same country at different periods. Household production is becoming relatively less important, while the production of things for the market, the value of which is readily measured in money, is constantly gaining in importance. Hence, *apparent* annual production — the production of things which have a market price set upon them — is increasing more rapidly than is the *real* annual production. The result is a tendency to overestimate our progress and even to count as progress what may not be progress at all. Thus, should boarding house and hotel life displace private housekeeping, annual production might appear to increase as a result of the change, though the real wealth and income of the country would evidently be affected in no such degree. The fallacy underlying such statistics is the key to the old joke about a community whose members "get their living by doing one another's washing."

Still further care must be exercised in studying official or unofficial estimates of the wealth of a country. These estimates are ordinarily made in terms of money. Now if commodities are very abundant, relatively to money, their price, other things being equal, will be low, though the real wealth of the country is great. If, for instance, the quantity of cotton cloth produced doubles between two census periods, while the price falls one-half, the total value of the product will appear in the census estimates as equal in the two cases, though it is evident that society in the second period has twice the amount of this valuable commodity.

Over-production and Under-consumption. — It is not uncommon to find men expressing a belief in the possibility of general over-production. Still more common is it for men to hold views which could only be correct if general over-production were a possibility. Even some economists a cen-

tury ago fell into the same error. *By general over-production is meant a production of commodities in general beyond the needs of society.* Careful thought will show at once the absurdity of such an idea. The purpose of production, as we have seen, is consumption. Manifestly, there has never been a time when more economic goods were produced than men really needed to satisfy their legitimate wants. On the contrary, there has never been enough produced for this purpose. Sometimes, indeed, production moves forward unevenly, and undue amounts of labor and capital are for a time devoted to producing particular commodities; but until all men are well fed, well clothed, and well housed, and furnished with material and other agencies for their higher life, such as books and pictures, it will be a manifest absurdity to talk about general over-production. *When there is an almost universal difficulty in disposing of goods, the chief cause is not over-production but under-consumption.* Men want the goods, but they cannot at the time dispose of their services, and consequently lack the purchasing power that would enable them to satisfy their wants. When any class of goods is produced in such quantities that the price falls below the cost, we may say that there is over-production of these goods. Such over-production is not uncommon. It is one of the unpleasant features of our complex organization of economic society that its parts do not always work together harmoniously. Producers are more and more separated in time and space from those who are to consume their products. It follows that only the shrewdest producers can calculate with any approach to accuracy how intense will be the wants for their goods, and in what quantities rival producers will furnish goods to the market. *Mistakes in judgment result in over-production in particular industries, and over-production in a few industries often leads to the spread of doubt and uncer-*

tainty throughout the business world. Then men in their fear restrict production and thus incidentally close the market for labor. Laborers, seeking and failing to find regular employment, lose their purchasing power, with the result that the underconsumption spreads all along the line, and society passes through what is called a crisis or panic, followed by an industrial depression. Such crises and depressions have been startlingly regular since the Industrial Revolution, the greater ones coming at intervals of about twenty years, with minor ones in the alternating ten-year intervals.

The explanation here given of crises and the resulting industrial depressions is widely accepted by economists, but there are two other explanations that should be mentioned. Some radical writers regard the unequal distribution of wealth as the fundamental cause. If wages do not rise in proportion to the general increase in wealth, it is argued, the mass of the consumers, who are wage-earners, will lack the means to purchase the goods produced. Again, other writers emphasize the monetary and credit aspects of crises. The crisis of 1893, for example, is by some regarded largely as a monetary disturbance.

Production and Sacrifice. — Consumption regularly affords satisfaction. Production as regularly requires sacrifice and exertion. We should recall here, what we have already noted in studying consumption, that the balancing of the satisfaction of wants derived from consumption against the exertion and sacrifice required by production lies at the very center of all economic thought. It is true that much labor seems in itself so pleasurable that it affords its own satisfaction. But if such labor is not sufficient to produce the goods that society demands, other labor which does not contain its own reward must be applied to production, and the same reward will be paid by society for all labor applied to that end. In most cases, however, it will be found on investigation, the pleasure comes from the actual or anticipated

result of the labor rather than from the labor itself. Again, when we consume to-day less than we have means to consume, with the object of greater production in future time, we are aiding in production by temporary abstinence from a possible pleasure. True, in such cases we hope to get in the future a satisfaction that will outweigh the present unsatisfied feeling, but the unsatisfied feeling is present with us and must be endured if we are to contribute to production.

The Production of Goods and Services. — In what follows we shall treat the production of material goods and services together, since there is little essential difference between the two forms of production. It is worth noting, however, that *the proportion of human effort devoted to the production of commodities and services respectively varies with the progress of civilization.* In early stages, when only the most pressing wants are either felt or satisfied, men perform for themselves such simple services as are required. It is only later that there arises a want for such personal services as call for special training. The social order gradually increases in complexity, and as a result of new wants and increased means of satisfying them, division of labor among men makes a place for the singer and poet, the physician and priest, and for other classes who are engaged in producing personal services. As the production of material goods becomes better organized, requiring less proportionate human effort, greater numbers of people will find it profitable to specialize their training and effort toward rendering personal service of one sort or another to society.

SUMMARY

1. Production means the creation, not of things, but of utilities, by the application of man's powers to the physical universe.
2. Individual wealth is not always social wealth.

3. Many productive elements, such as woman's work in the household, and the gathering of natural products for home use, are often overlooked.
4. There can be no general over-production. What is thought of when that expression is used should rather be called under-consumption or unbalanced production.
5. With advancing civilization, an increasing proportion of human energy is devoted to rendering specialized personal services.

QUESTIONS FOR RECITATION

1. Define production. Compare the definition of consumption with that of production.
2. Why and how is the physician a producer? The teacher? The actor?
3. Mention instances of individual wealth. Of social wealth. Do all your examples belong to both classes?
4. As cities increase in size, the value of street railway franchises regularly increases. Is this value a result of production? Explain.
5. What is usually meant by the expression "over-production"? Is such a thing possible? What is it that is commonly mistaken for general over-production?
6. Show by a detailed explanation how it is that more men are engaged in rendering personal services than was the case in earlier days.

QUESTIONS FOR STUDY AND DISCUSSION

1. What economy results from the fact that with increasing population, there is a wider range of occupations open to individuals?
2. Is there any sense in which it may be argued that soldiers in war are producers? Is theft a process of production?
3. A farm worth $10,000 is mortgaged for $5000. Is the value of the farm and mortgage together $15,000 or $10,000? Explain. How should a tax be placed in this case upon the wealth?
4. What utilities are produced and consumed in your home which do not have a money value put upon them?
5. Germany owns her railways. How would this fact bear upon census estimates of the wealth of the German people as compared with similar estimates of the wealth of the people of the United States?

LITERATURE

For a general discussion of the subject of production, consult any standard work on Economics. A considerable number of these are given in the Appendix. See especially: —

Marshall, A.: *Principles of Economics*, Bk. II, Ch. II, §§ 1 and 2.
Mayo-Smith, R.: *Statistics and Economics*, Chs. III, IV, and V.
Mill, J. S.: *Principles of Political Economy*, Bk. I, Ch. I, §§ 1 and 2.

CHAPTER II

THE FACTORS OF PRODUCTION

The Three Factors. — Three things contribute to production as it is carried on to-day. They are therefore called the factors of production. Of these, two are called *original* or *primary* factors, because they exist in the very earliest forms of production, and because it is from them that the third factor is derived. These two factors are *land*, or nature, and *labor*. Of these, in turn, we may notice that one, land, is *passive*, while the other, labor, is *active*. In other words, it is primarily labor, acting upon nature, that produces wealth. From this action of labor upon nature, followed by postponement of the enjoyment of the result of the labor, comes *capital*, which we therefore call a *secondary* or *derived* factor. That is, it is secondary to nature and labor, and is derived from them.

Nature or Land

Meaning of the Term. — Under the term "nature" we here include all the material things furnished directly by her hand, together with all the natural forces used in production, — the power of the wind, the movement of water, gravitation, cohesion, etc. Some of these materials and forces are furnished in unlimited quantities, and are therefore free goods. It is common in economics to use the word "land"

instead of "nature," because of all the gifts of nature it is land with which we have chiefly to do in our science. But it must be remembered that the word "land" in this use has the very broad meaning which we have here given it. To avoid any possibility of confusion some economists have used the term "natural agents," when the broader meaning is intended.

What Land does for Production.— By analysis we learn that the service of land to production is not a single or a simple thing, but that it usually renders one or more of four distinct services. *In the first place* (1) *it furnishes standing room,* or *situs.* It gives men something, upon which they may rest and move about while conducting productive processes. Mere space is often a source of great value, as can be seen in the case of city real estate. As a continually increasing proportion of a growing population dwells in cities, this first service rendered by land is becoming more important. *In the second place* (2) *it enables men to utilize the natural forces that go with the land itself. In the third place* (3) *land contains those elements needed by plant life, and thus renders a service to agriculture.* We call this property of the land its "*fertility.*" *Finally,* (4) *land contains natural products below its surface,* such as coal, gas, petroleum, iron, silver, and gold. Man does not create these *natural treasures* nor give direction to nature in their formation. Some nations have deemed it unfair that they should become the property of individuals, and have therefore treated them as a common heritage, exacting a rent or royalty for the opportunity to exploit them. This is perhaps generally the case to-day on the continent of Europe; but English law, with its inclination to emphasize private rights, has by contrast fostered the idea that he who owns the surface owns downward to the center of the earth and upward to the sky.

The Law of Diminishing Returns from Natural Agents. — One of the most fundamental and far-reaching laws in economics is that which describes the result of investing labor and capital upon land or other natural agents. This law, known as *the law of diminishing returns*, will repay careful thought and study. We may profitably begin our study of the law in its application to agriculture.

Every farmer is naturally desirous of reaping the largest possible return from his expenditure of labor and capital upon his land. Yet this very statement implies that there is a limit beyond which further expenditure will be unprofitable. Let us see why this limit exists, and how it is determined. Suppose the case of an acre of land which a farmer intends to "put into" potatoes. The field would yield some crop even if it were hurriedly and poorly plowed, if no fertilizer were used, and no care were taken to prevent the growing vines from destruction. Yet the farmer knows that further expenditure of labor and capital will result in a much larger crop, and that, if prices are good, the increased crop will fully repay the increased outlay. If we were to inquire more particularly from the farmer as to his opinion regarding the possibilities, we might get from him something like the following estimate: —

An Investment of	Would Give a Total Return of	Or an Average per Dollar Invested of
$ 5	40 bushels	8 bushels
10	100 bushels	10 bushels
15	165 bushels	11 bushels
20	200 bushels	10 bushels
25	225 bushels	9 bushels
30	240 bushels	8 bushels
35	245 bushels	7 bushels

Let us stop for a moment to consider carefully what the table means. In the first column investment, of course, means dollars' worth of labor and capital expended in cultivating the acre. Hence, if at a particular point the farmer gets a product that sells for an amount of money equal to the investment, he will have been repaid fully for his work and waiting. Moreover, the investment may, for the sake of simplicity, be thought of as at the date of the sale of the product, thus including an allowance for accrued interest on the labor and capital applied to the acre. But the numbers in this column do not include any payment for the use of the land, since we are here considering only the cost of cultivation; moreover, as will later appear, our present study will show us how and why anything can be paid for the use of an acre of land, and how much can be so paid under any given conditions. The numbers in the third column are the quotients obtained by dividing the corresponding numbers in column two by those in column one. With this explanation of the table, let us now return to it to discover how it illustrates *the law of diminishing returns.*

An examination of the figures will show that doubling the expenditure, from $5 to $10, results in more than doubling the product, and that similarly the increase in the product is more than proportionate to the increase in expenditure in the case following. But notice that when the expenditure is increased from $15 to $20, — an increase of one-third, — the increase in the product is only from 165 bushels to 200 bushels, — or only a little more than one-fifth, — and that in the same way in the following case, increasing the expenditure by one-fourth results in an increase of product of only one-eighth, and so on. In other words, up to a certain point, — here represented by the $15 investment, — an increase of

expenditure results in a proportionate or more than proportionate increase in return, while after that point has been reached, further increase in expenditure results in less than a proportionate increase in the return. If it were not for this fact, there would be no limit to the amount of labor and capital which the farmer could profitably employ in the cultivation of the acre of land. And the fact that farmers are everywhere strictly limited as to the amount of such profitable expenditure is in itself complete proof that such a point of diminishing returns exists in the application of labor and capital to natural agents.

In the table *the least average cost of production* appears to be at or near the investment of fifteen dollars, and *the single bushel produced at least cost appears* to be at the same point, *so far as the numbers given indicate.* But if the intervals between successive assumed investments were made sufficiently small, it would be found that the point of least average cost and the point of least cost for the last or marginal bushel would not coincide. For when the bushel of least cost has been reached, it will be found that the next succeeding bushel, though costing more than the one before, nevertheless costs less than the average of all produced up to that point, and hence its inclusion with those gone before will lower the average. The point of least average cost — somewhat beyond the point of least marginal cost — is really the *point of diminishing returns;* but in the table no difference is apparent, and it will rarely be of practical importance to note such a difference. Hereafter we shall disregard it, unless some practical consequence is involved.

It will appear on reflection that the farmer will not necessarily discontinue his expenditure upon the land at the point at which the product begins relatively to diminish. The *limit of profitable expenditure* — or *intensive margin of cul-*

tivation — will depend upon the expected price of the product. Thus at a price of ten cents a bushel, the farmer would lose absolutely in all except the second, third, and fourth cases in our illustration, and he would make a surplus only in the third case. At a price of nine cents a bushel, he could not afford to raise the crop at all. On the other hand, at a price of one dollar a bushel he could afford to expend $35 upon the acre, since the last $5 of expenditure would yield a return of five bushels, which would sell for enough to repay him for the marginal labor, materials, etc. We may, therefore, say that there are two ways in which the proportion of returns diminishes as expenditure increases: *there is a diminishing return from the point of view of the product, and there is a diminishing return also from the point of view of the value of the product.* The second is of course decisive with the farmer, *but this itself is due to the diminishing return measured in terms of the product.*

A further point remains to be particularly noted. An imperfect understanding of the nature of the law has led at times to the conclusion that as population increases it must inevitably become increasingly harder to secure the means of subsistence from the soil. But this conclusion is at variance not only with the known facts of the history of society, but also with the law itself when the law is properly stated. Such a conclusion would indeed be valid if the point of diminishing returns remained everywhere at the same point from year to year and from generation to generation. But we all know how far from the truth this last assumption is. The art of agriculture is constantly improving as a result of invention and the discovery of better methods and processes, and every improvement makes it possible to secure a greater crop without a greater expenditure; in other words, *every such improvement pushes forward the point of diminishing*

returns. The law of diminishing returns still holds true. There is still and always a point beyond which further investment of labor and capital upon an acre of land will yield a less than proportionate return, but that point is not now reached so soon as before.

We are now ready for a formal statement of the law we have been discussing. *At any given time, there is a point in the investment of labor and capital upon a unit of any natural agent beyond which further investment yields a less than proportionate return.*

We have taken for our illustration the case of labor and capital expended in agriculture. But the law is equally true of the expenditure of labor and capital upon land or other natural agents in the case of mining, manufacturing, and commerce. The only difference is that in these industries greater amounts of labor and capital may be expended upon a given unit of land, — say an acre, — before the point of diminishing returns is reached, than is the case in agriculture.

The above statement of the law of diminishing returns is the one that has been most used in economic analysis; and this form of the law will always be meant when reference is made to such a law, unless otherwise expressly stated. But it is possible to look upon the law of diminishing returns from other points of view than that adopted here. For example, instead of taking an acre of land as a unit and supposing successive amounts of labor and capital to be applied to it, we might have considered the farmer himself as the unit, giving him successive amounts of land, labor, and capital to manage. In this case we should also have found at first an increasing and then a diminishing return. And in like manner, we might consider the effect of combining increasing "doses" of land and labor with a fixed amount or unit of capital.

Labor

Definition. — The second of the primary or original factors in production is labor. *Labor is human exertion of mind or body undergone with the object of creating utilities.*

A common classification distinguishes mental from physical labor. In making this distinction it is well to bear in mind that from the purest instance of mental labor to the purest instance of physical labor there is always some mixing of both forms. The philosopher must labor with hand or tongue if he would give the results of his thought to the world, and, on the other hand, even the ditch digger can by no means do his work without the exercise of intelligence.

We must never forget that *labor is not an end in itself, but is only a means to an end,* the satisfaction of wants. With this thought firmly fixed in mind, it will not be difficult to understand that increase of labor, unless it means increase of human satisfactions, is not socially desirable. Breaking window panes makes a chance for labor, but it does not increase human satisfactions as a result of that labor. On the other hand, labor-saving devices, while they may injure individual laborers, are beneficial to society as a whole, since they enable it to secure greater satisfactions by the same exertion.

A Nation's Labor Force. — A question of prime importance in connection with labor is that of the conditions affecting the total amount of a nation's labor, — what might be called *the nation's labor force.* What determines this? Evidently it is not mere numbers, since a hundred workers in one country often furnish much more labor to production than do a hundred workers in another. Analysis of the subject shows that the two main determining factors are (I) *efficiency* and (II) *quantity.* The *efficiency* of labor de-

pends in turn first of all upon (1) *the efficiency of the workers themselves,* — upon their characteristics, mental, physical, and moral. Temperance, trustworthiness, skill, alertness, quick perception, comprehensive mental grasp; — all these good qualities minister to the efficiency of the workmen, and hence of labor. In the formation of these qualities the physical and social environment in which the laborers are reared and do their work is of the greatest importance.

(2) The second influence conditioning the *efficiency* of labor is *the manner in which it is organized and directed.* As we are to discuss this separately and at some length in the next chapter, we need note here only that when labor is carefully organized and directed, so that each worker can do continuously the work for which he is best fitted, the labor by that means becomes indefinitely more efficient.

(II) The second factor in determining a nation's labor force is its *amount or quantity.* This again depends partly (1) upon the *aggregate number of hours* during which laborers work, varying with the length of the working day, the number of holidays in the year, etc. A ten-hour working day means a greater quantity of labor than an eight-hour day, and therefore a greater labor force, *provided the efficiency is not proportionately impaired by the long hours of work.* A nation's labor force undoubtedly increases, other things being equal, (2) with *the growth of population,* which means a *possible increase* in the number of laborers.

The Malthusian Theory. — Now, to the growth of population there is no absolute limit save that presented by the means of subsistence which can be secured. Throughout recorded history we again and again find the population of one country and another increasing to the starvation point; *i.e.* increasing until the means of subsistence were less than sufficient for all who had been born. From this fact has

arisen a fear lest this over-population shall always repeat itself in the future as it has in the past. Those who are much moved by such a fear have often on their lips the theory called Malthusianism, from the name of an English economist, Thomas Robert Malthus, who lived and wrote at the end of the eighteenth century and the first third of the nineteenth century. According to this theory, population *tends* to increase in geometrical progression (*i.e.* by multiplication: 2–4–8–16 etc.), while the best that we can hope in the case of food is that it may increase in arithmetical progression (*i.e.* by addition, 2–4–6–8–10 etc.). Consequently, if there were no other checks upon the increase of population, men would soon reach the point of starvation.

Positive and Preventive Checks upon Population. — It is admitted by the theory that such checks exist. These are of two kinds, *positive* and *preventive*. *Positive checks are those that act through the death of the living,* — checks that increase the death rate, such as plagues, pestilence, intemperance, infanticide, cannibalism, and war. These positive checks may be " exclusively misery," as proceeding unavoidably from nature, or they may come indirectly from vice that leads to misery. *Preventive checks are those that act through a lowering of the birth rate.* These are found either in *vices* which result in incapacity for parenthood, or in what Malthus called *prudential* restraint, — a moral check, consisting in the postponement or avoidance of marriage, or of the upbringing of a family. Conscientious men will be slow to marry unless they can support a wife and rear their children worthily. As population becomes denser, such men find the burden of rearing a family heavier, and therefore postpone marriage or avoid it altogether. With every increase of the average age at marriage, the number of children born decreases more than in the same proportion.

Innumerable customs exist all over the world which have grown up from the social need of checking marriage and population, as, for instance, the custom which obtains in some peasant communities of marrying only when a cottage becomes vacant by the death of its former occupant. Malthus himself formally deduced only this lesson: *let no man marry until he has a reasonable prospect that he will be able to support a family of the average size.* He wished to intensify in Englishmen the feeling of parental responsibility.

"Prudential Restraint." — It might be thought that such prudential restraint will come to be operative in such a way as easily to prevent the danger of over-population; but Malthus himself often forgot the hope contained in man's gradual enlightenment, and took a gloomy view of the future. Others, following Malthus in his gloomy reasoning, have thought that there is no escape for the race from repeated over-population with all its resulting vice and misery. Modern civilization, however, gives much cause for hope that as prosperity becomes diffused among the people, the problem of over-population may lose its serious aspect.

Statistics show conclusively that everywhere advancing civilization has been accompanied by a decline in the birth rate. This decrease in the birth rate seems to have appeared first in France, where it is most extreme, and to have shown itself increasingly in later years there and in other countries, apparently moving from the well-to-do classes through the artisan class and towards or even to the class of the very poor. In large though varying measure the tendency appears among people of nearly all advanced countries, sections, races, religions, and social classes, though interesting differences are observable. How far the tendency is a manifestation or an extension of the prudential restraint of which Malthus wrote, is still to some degree a matter of dis-

pute, discussion of which would be beyond the just limits of an elementary text.

Population and the Standard of Living. — In a later chapter, on Wages and the Labor Problem, we shall study at some length the influence exerted upon population by the *standard of living, — the amount of necessaries, comforts, and conveniences which people are accustomed to enjoy.* Here we may just pause to note that where the standard of living is a high one and is firmly maintained, anything that threatens it will set in operation the preventive checks to which we have referred. But the standard of living is not absolutely fixed, and changes in population through the action of preventive checks come about only slowly. It may therefore happen that when the standard is assailed by continued national adversity, the rising generation may be brought up to accept a lower standard, according to which a greater increase of population will be possible and natural. Such a possibility represents one of the costs of war that has been too little considered.

The Two Sources of Increased Population. — The population of any country, as distinguished from the whole world, has two sources of growth, — *natural increase* and *immigration.* Natural increase comes about in any country through a *continued excess of births over deaths;* in other words, through a birth rate which on the average exceeds the death rate. Such an excess, however, may result from any one of several widely differing conditions. Thus some countries, *e.g.* Russia, have a very high death rate with a still higher birth rate, while in other countries, *e.g.* England, the increase results from an excess of a low birth rate over a still lower death rate. It is evident that the proportion of persons capable of labor, and hence the nation's labor force, will be greater where the death rate is low. Manifestly, too,

it makes a great difference in the real happiness of a country whether the increase in population is due to the one condition or the other. In our own country, population has increased with wonderful rapidity for over a century both through immigration and natural growth. Down to the beginning of the Great European War, immigration continued to increase almost without a break from year to year; and though the birth rate has been gradually falling, the death rate has fallen almost as steadily, with the result that natural increase of the population has been uninterrupted.

Capital

Definition. — The third factor in production, the secondary or derived one, is capital. Itself neither land nor labor, capital is derived from the two, and yet is a new thing with properties of its own. In everyday speech the word "capital" is often used loosely to describe things that are not capital at all in the technical language of economics. Thus the word is often used to include land, because, in many respects, to the man engaged in a business enterprise there is little difference between his land and his machinery. Yet technically the two should be sharply distinguished. Again, business ability is often described as personal capital, and there is a certain sense in which this figurative expression has a value; but it should always be remembered that such language is only figurative. Land is nature; capital is a human product. Labor is indissolubly connected with the personality of the laborer; capital is a material thing resulting from that labor. Even more frequently in everyday speech do business men use the word capital to describe either the amount or value of the *capital stock* of a corporation, or the whole value of a going business, — whether in-

corporated or not, — including land, buildings, stock in trade, accounts receivable, money in bank and in till, etc. Hence the sharp caution here given that the word capital, as used by the economist to name the third factor in production, *consists of those intermediate products which are used for the purpose of further production.* More briefly still, *capital means the produced instruments of production.*

Classes of Capital Goods. — Capital is "the medium through which the two original productive powers exert their instrumentality." *It includes* not only all the (1) *man-made aids to production,* such as buildings, machinery, and tools, but also all those (2) *unfinished goods,* such as hides and bar iron, which enter into further production; and also (3) *finished consumers' goods, so long as these have not passed into the possession of the final consumers, but are still having added to them place and time utilities.* Partly manufactured materials are technically spoken of as in the "process of ripening." Fully "ripened" goods in the possession of final consumers are no longer to be regarded as capital, although from their wise use new capital may result.

The Function of Capital. — The function of capital may be expressed as follows: *It enables men to utilize more completely nature's materials and forces by the substitution of roundabout methods of production for direct ones: and it accomplishes this result by furnishing the tools for such roundabout methods, and by making possible a longer interval between the initial effort and the final effect, or consumption.* Roundabout methods are almost without exception more efficient than direct ones, but these methods require tools or machinery and a lengthened period of production. Thus, a man may lift a heavier weight by the roundabout method of using a lever, instead of relying upon his unaided strength, since in this way he summons nature's forces to his aid.

And generally speaking every improvement in machinery means a more roundabout method of applying labor. Capitalistic production, therefore, as it develops, shows a continual increase in the number of steps between the initial movement and the final product, and, as a general rule, an increase in the length of the interval.

Improvements sometimes seem to shorten processes, but when we go far enough back in our studies, we find that the rule given above is in general correct and that it directs attention to one of the most remarkable and significant principles of capitalistic production. The student must not allow himself to fall into the easy mistake of confusing the last stage of the capitalistic or roundabout process with the whole process. A ride in a railway train means more than taking a seat in a car and being whirled through space. It means the efforts, reaching back through years, of men who have made roadbed, bridges, car, and engine; the earlier forms of capital by which these in their turn were made; and so on and on through a vista of years that tasks the mind to penetrate. So too, in watching a threshing machine at work we note at first only that it threshes grain rapidly, but we have not grasped the real function of capital in this case until we recall the innumerable steps involved in the production of the machine and the length of the process when so regarded. The roundabout methods, of course, are not an end but a means to an end.

The Origin of Capital. — It is often said that capital is the result of saving, but such a statement of the case is at least misleading. Saving, as such, is merely negative and cannot produce a positive result. In order that we may save, we must first have something to save, — that is, we must produce, — and, moreover, we must produce something more than is sufficient for existence; in other words, we

must have a surplus. If such a produced surplus is laid by or saved, it *may become* capital.

Methods of Capital Formation. — Such savings do become capital when they are devoted, directly or indirectly, to furthering production. One of the simplest ways in which saved surplus may be transformed into capital would be illustrated by the case of a fisherman who should use part of the catch of one period for subsistence while in a later period he worked at a canoe, or net, or other device for increasing the product of his future labor. In advanced communities the process is usually much more complex. The farmer, for instance, who wishes a self-binder, pays for it directly with money. But the money has been received in return for a saved surplus of his farm products. Meanwhile, those who have been working on the manifold processes which result in the finished farm machine, have been supported from a surplus which has been advanced to them. The case is the same with the manufacturer. He may sell his products and consume at once the resulting means of livelihood or he may consume less than all, and with his remaining means may purchase from others the forms of capital of which he stands in need. Or, having all the machinery needed, he may invest his surplus in the stock of some company, in which case the company will use it for the purchase of needed capital goods. In all these cases the use of money obscures the nature of the transaction, which is at bottom only the turning of a part of society's labor force from the production of finished consumption goods to the production of capital goods in order later to increase and make easier the production of consumers' goods.

Summing up, then, we may distinguish logically the following steps in capital formation: (1) *production beyond the necessity of the present;* (2) *postponement of the consumption*

of part of this product; (3) *use of the saved surplus to make possible greater future production.*

Results of the Use of Capital. — It remains for us to say a few words regarding the results of the use of capital. First of all, (1) *capital makes possible an increased amount of product.* Things that could be produced by hand and without capital can be produced in much greater quantities when capital is present. In the second place, (2) *capital makes possible certain goods which we could not enjoy at all without it.* Thus, the enjoyment of oysters and shellfish at great distances from the coast would be impossible without the capital engaged in transportation. Finally, (3) *capital makes possible in many cases a higher quality of product* than could exist in its absence.

Representative Goods. — One class of goods, if they may be so called, must be especially distinguished from capital in the technical sense of the word. We refer to what we have earlier called "representative" goods, which from the point of view of society are not goods at all, but only signs of the ownership of goods. Notes, mortgages, bonds, and stock certificates are not social goods; they simply represent ownership. Neither are franchises a part of social capital. When a city grants to a company a franchise for the construction and operation of a street railway, it does not thereby directly create new capital. It merely grants permission to the company to make use of existing social capital or to create social capital.

Fixed and Circulating Capital. — It has been common among economists to classify capital as *fixed* and *circulating. Circulating capital is that which can be used but once, or in one round of operations, its value passing once and for all into the value of the finished product. Fixed capital,* on the other hand, is capital which *lasts through a succession of operations,*

only a part of its value passing over into the product with each use. Thus, the raw materials and the partly finished goods used in manufacturing are examples of circulating capital, while the factory building and the machinery are fixed capital.

Free and Specialized Capital. — A classification, which superficially resembles the one just given, but which is really quite distinct from it, is that of *free* and *specialized* capital. Even more than is commonly the case with such classifications, these words must be understood as pointing only to relative ideas. Specialized capital is that which by its form or circumstances *can be used for only one line of production,* or at most *for a very limited number of such lines* of production. Free capital, on the other hand, is capital which *can be applied to any one of a considerable number of lines of production.* Thus coal, iron, and leather are relatively free forms of capital, while railways, canals, and many forms of machinery are relatively specialized. The practical importance of the difference lies in the fact that free forms of capital can more readily adjust themselves to changes in the social demand for goods. Thus, if too great an amount of a nation's capital is converted into specialized forms, — into railways, for example, — the mistake is not easily or quickly corrected, and the entire production of the country must suffer in consequence of the bad adjustment. Such disproportionate investment of capital in specialized forms is believed by some economists to be the most important single cause of crises and industrial depressions.

SUMMARY

1. Of the three factors of production, land and labor are primary and original, while capital is secondary and derived.
2. Land furnishes "standing room," natural forces, fertility, and natural treasures.
3. Labor means human exertion of mind or body undergone with the object of creating utilities.

4. A nation's labor force depends upon its efficiency and quantity; efficiency depends upon the efficiency of the individual laborers, and upon the efficiency of their organization; quantity depends upon aggregate working hours and number of workers.
5. Capital consists of intermediate products used for further production.
6. The formation of capital involves saving or postponement of possible consumption.

QUESTIONS FOR RECITATION

1. Mention some of the checks upon population. How does the standard of life affect the increase of population?
2. Why should land be distinguished from capital? To which class does a building upon land belong? the fertilizer that was used five years ago?
3. What advantages flow from roundabout processes of production? Mention some of the steps in the development of indirect processes in the production of wheat.
4. Distinguish between free and specialized capital; between fixed and circulating capital. What are representative goods?

QUESTIONS FOR STUDY AND DISCUSSION

1. In what sense is it true to say that labor produces all goods, or that capital is not productive?
2. Is capital active or passive as regards man? as regards nature?
3. Is tennis for recreation to be classed as play or as work? amateur baseball? professional baseball? burglary?
4. Discuss America's labor force from the point of view of the analysis of this chapter.
5. What is the effect of a long-continued high rate of infant mortality upon the proportion of workers in any population?
6. Prepare a table illustrating the law of diminishing returns in such a way as to show the difference between the minimum average cost and the minimum cost of a single bushel.

LITERATURE

Clark, J. B.: *The Distribution of Wealth*, Ch. IX, pp. 116–123.
Commons, J. R.: *The Distribution of Wealth*, Ch. III.
Fetter, F. A.: *Principles of Economics.*
Marshall, A.: *Principles of Economics*, Bk. IV, Ch. I, § 1.
Seager, H. R.: *Introduction to Economics.*
Seligman, E. R. A.: *Principles of Economics.*
Taussig, F. W.: *Principles of Economics.*

CHAPTER III

THE ORGANIZATION OF PRODUCTION

In the preceding chapter we have considered the factors of production separately, studying the nature of each, and the principles governing its efficiency and increase. We have now to study the manifold ways in which production in our day has come to be socialized and organized. It is as though we had studied the nature of the various parts of a machine, and were then to study further the different ways and methods of putting the parts together, and to learn how the resulting whole acted as a unit when the machine was "set up."

I. Organization of the Factors Regarded Collectively

Early Simplicity. — We have already seen that the three main parts of the great machine of production are land, labor, and capital; and we may therefore first of all inquire how these parts are "assembled" for efficient work. In other words, the first problem in our present study is that of the coöperation or organization of the factors of production taken together or collectively. This organization, in the early stages of social development, was exceedingly simple. The old household economy was so organized that, if it were universal to-day, we should not think of distinguishing in it

the three separate factors. The same man owned the land, the labor, and the capital, and as sole judge of what was right distributed the total product among those who aided in production. When, with advancing civilization, production came to be carried on by village communities, there was collective ownership of the instruments of production and management by a common authority, and the distribution of the product was regulated by custom. Later, under the gild organization of industry and commerce, there was a similar lack of sharp separation of the factors. The early gilds embraced apprentice, journeyman, and master, and regulated industry and commerce under governmental supervision. The master directed the business, owned the capital, and worked with his own hands. He received the entire product of the business after supporting the apprentice and paying the journeyman. Labor was in a certain degree set off from the other factors, but the separation was by no means complete. The man who at any time supplied labor looked forward, not without reason, to the time when he himself in turn should become capitalist, employer, and manager, for such advance was a regular part of the gild system.

Growth of Complexity. — As has been explained in earlier chapters, the last one hundred and fifty years or so have witnessed a great change in the organization of the productive factors. Here and there traces still survive of the earlier simplicity, and one great branch of production, agriculture, is generally carried on in our country without much separation of the ownership of the factors. A large proportion of our small farmers own the land they cultivate and the capital they employ, and depend wholly or in great part upon their own labor and that of their families for their product. But in commerce, manufacturing, and transportation, we have as a rule to-day one large class furnishing labor only, another

class furnishing capital and sometimes land, and a third class organizing and managing business. A modern railway corporation serves as a good illustration of this. The holders of the bonds and stocks furnish the capital, and receive in return interest on their bonds and dividends on their stock. Labor, supplied by others, is paid for by wages and salaries. The land is also regularly supplied by the bondholders, being acquired by the exchange of a part of their funds. Consequently, we have rent also, though this does not usually appear as a separate item in railway bookkeeping, except in those cases where the land has been leased instead of being purchased outright. Finally, the managers and directors of the business, chosen by the stockholders from their own number or from without, constitute a separate class in the organization.

The Entrepreneur. — It is easy to see that when business organization has grown so complex, some central guiding intelligence is necessary, which shall overlook the whole field, and, after deciding what things shall be produced, and in what quantities, shall provide that the necessary factors of production work together in creating the product. The man who does this usually assumes the risk of loss or failure, and, on the other hand, pays a stipulated sum to those persons or classes who supply him with the factors of production.

In the England of the eighteenth century such a man was called an "undertaker" or "adventurer." As the word "undertaker" has since come to be applied to one small and special class of business men, and as the word "adventurer" now carries with it an idea of rashness or even dishonesty, the French word "entrepreneur," an exact equivalent of the word "undertaker," is now commonly used, though in recent years the name "enterpriser" or the figurative title "Captain of Industry" is frequently used instead.

The function of entrepreneurship has become of the utmost importance in modern society, and seems to be growing in importance with every increase in the complexity of industrial organization. The entrepreneur has been well called the "Captain of Industry," since it is he who marshals and commands the industrial forces, and more than any one else bears the responsibility for failure or success. Business enterprises under able leaders achieve brilliant success only to languish and become bankrupt when death removes the guiding hand and brain. Whole towns in many cases depend for their prosperity upon a few shrewd Captains of Industry. Possibly, however, the importance of any one individual for the success of a business tends on the whole to decline with growth in the complexity of industry. The organization of a vast modern corporation, with its large directing board and its many executive officers, seems to secure an impersonal stability and permanence that may defy the chances and changes inevitable in the life and work of the single individual.

The function of entrepreneurship is so important in modern industry, and the services of the entrepreneur so distinctive, that it might almost be well to treat the entrepreneur or entrepreneurship as a fourth factor of production, in addition to those explained in the preceding chapter. Indeed, when we come later to discuss the shares of social income secured by the various factors, we shall recognize the peculiar and distinct character of entrepreneurship by studying its separate share under the name of profits.

The Forms of Business Undertaking. — The entrepreneurship of a business is not always undertaken by a single individual. On the contrary, a rapidly increasing volume of business is coming to be carried on in forms which call for a division of the function or functions of the entrepreneur

among many individuals. The following are among the main forms of business undertaking in the modern world : —

1. *The Single Entrepreneur System.* — In this form of business, a single individual owns or hires the capital and land, employs the labor, directs the business, and bears the whole risk.

2. *Partnership.* — In the case of a partnership, the ownership, direction, and responsibility are shared, sometimes in unequal proportions, by the two or more partners, who as a rule are severally liable at law to the full extent of their fortunes.

3. *Business Corporations.* — This form differs from the foregoing chiefly in the fact that the individual responsibility of the members of the corporation is limited by the charter or by the statutes governing such companies, and in the further fact that there is no necessary legal limit to the life of such corporations. On account of the magnitude of business transacted under this form, it often happens that the functions of entrepreneurship are divided, the shareholders owning and controlling the business, and bearing the risk, but committing the active management to elected directors and, through the directors, to hired superintendents and managers.

One of the most striking characteristics of the industry of the United States during the last fifty years has been the mighty trend from individual and partnership to corporate ownership, especially in the fields of transportation, mining, and manufacture. Transportation has passed almost completely into this form. Mining is not far behind. In manufacture, according to the thirteenth United States census, corporations reported 79 per cent, or nearly four-fifths, of the value of all manufactured products in 1909. Ten years earlier, 65 per cent of the value of manufactures had been

produced by corporations. It is not improbable that by 1920 the proportion of the entire value of manufactures produced by corporations will have risen to 90 per cent. In agriculture the tendency is so slight that the United States census has made no study of the forms of ownership. But it is a matter of common knowledge that there are farms owned and managed by corporations.

4. *Coöperative Businesses.* — In what is technically known as coöperative production, the workmen combine, — under the legal form of partnership or corporation, — in the ownership or control of the other factors of production, share all risks, and secure direction of the business either through their own members, chosen for the task, or through regular salaried managers. This form, therefore, in its legal character, cannot be distinguished from the foregoing.

5. *Government Enterprise.* — The Federal, state, and local governments severally own and manage many businesses of great importance. In these cases the people as a whole own the business and bear all risks, while they commit the direction to elected or appointed managers.

II. The Organization of the Factor Labor

In studying the forms of business undertaking, we have really been studying the different ways in which society secures coöperation and organization of the factors of production as a whole. We have now to study the ways in which the factors, considered separately, are organized for increased efficiency. And first as to labor.

If it were possible to conceive of a people among whom every individual produced for himself all that he used, exchanging products with no one, we should have an example of *isolated* or *unorganized* labor and unorganized production.

But there is no evidence that such an extreme state of things ever obtained anywhere. Wherever we find men gathered together, we find some *socialization,* some organization of their efforts to secure a living, some organization of the factor labor.

Forms of Organization. — 1. *Simple Associated Effort.* — One of the earliest forms of organization to be developed among men, and one that still plays a considerable part in the economy of the world, is that which has been named *simple associated effort.* When a group of men unite their efforts in raising a heavy weight, or two men beat together a heated iron or work a saw, we have illustrated this simple form of organization. Sometimes, as in the first of these cases, the combination is to effect a result which could not be accomplished at all by the single individual. Always the combination results in a greater accomplishment than would flow from the sum of the efforts of the several individuals.

2. *Division of Occupation.* — With advancing civilization, industry as a whole has been more and more broken up into parts, and the parts have, therefore, constantly been growing smaller. One of the earliest steps in the organization of labor, perhaps even earlier than that which we have described above, was taken when the members of primitive society began to specialize in their work. And the whole story of society since, not only in its economic phase, but in all its other phases as well, has been a lengthening tale of increasing specialization of work or function. With division and subdivision constantly taking place, it is clearly impossible to recognize or name all of the stages of progress. But two of these stages are recognized in popular speech as of distinct character. The first of these is what we may call *division of occupations.* Probably the most primitive form of such division was that by which among savages the men

took upon themselves the functions of warriors and hunters, putting upon the women the tasks of the household and the field. Division of occupations is indicated by the names of the manifold trades or callings.

3. *Division of Labor.* — The further subdivision of existing occupations has been largely the work of the last few centuries, and especially of the last two. To this further subdivision — this further organization — of labor has been given the technical name *division of labor,* although, as we have seen, division of occupations is but an earlier division of labor on larger lines. This form of organization is of such prime importance in modern industry that it calls for detailed and careful study.

In our discussion of labor as a factor of production, it was pointed out that the efficiency of labor is in great measure conditioned by the efficiency of its organization. Such efficiency of organization is secured in the highest degree through division of labor. Division of labor — as well as division of occupations — might perhaps with equal propriety be called coöperation of labor. Productive processes, especially in manufacturing, are to-day divided into minute parts, one part or perhaps two or three very small parts being given to each workman, or to each group of workmen. Thus, in a modern watch factory, one workman makes one small part of a watch, another a second, and so on. So many are the divisions of the process of watchmaking that it has been said that no fewer than 300 workmen are required for the efficient working of such an establishment. In the same way, instead of one man performing all the operations in the making of a boot, as was once the rule, we have to-day a front cutter, back cutter, back-stay cutter, top cutter, facing cutter, lining cutter, sorter and buncher, size and case marker, stay skiver, top skiver, crimper, front trimmer, top-

front stitcher, top-back stitcher, and so on to as many as 113. But while the workmen divide the processes among themselves, they unite in producing the completed article, and hence we may say that division of labor implies coöperation of labor. When we use the phrase "division of labor," we are looking at one side of the process; while, when we speak of coöperation of labor, we are viewing it from the opposite side. And the same is true of division of occupations.

Division of Labor Illustrated. — A good illustration of division of labor is afforded by the needle-making industry as it is generally conducted to-day. Steel wire, which is itself the product of highly divided labor, is the raw material of the needle factory. All needles pass through the same general list of processes. These, as the visitor to the factory may view them, are in outline as follows: The wire is first put through a machine called the straightener and cutter, which removes all bends in the wire and cuts it into pieces about one-third the length of the finished needle. These short pieces, called *blanks*, are placed in small iron cylinders, which are rotated in such a manner as to keep the wire in constant motion under friction. They are thus freed from scale and dirt, and are ready for "cold swaging." For cold swaging, the blanks are put into a hopper, from which they are taken by machinery, one at a time, and held so that one end is presented to the action of a set of revolving sectional steel dies. By the constant opening and shutting of these rotating dies, the end is compressed and drawn out to form the needle "blade." After the swaging is finished, another bit of machinery is made to stamp upon the flattened surface of the needle a number or mark, which indicates what sort of needle it is finally to be. Inequalities are next remedied by trimming all blanks to a uniform length. When the blanks have been trimmed and stamped, they are taken to a grooving machine,

by which a short groove on one side of the needle and a long groove on the other side are made simultaneously. The needle is now ready for its eye. Women are usually employed in this process, which calls for a high degree of manual dexterity and keen sight in controlling the blanks as they are "fed" through the machine. One girl with modern machinery can punch about seven thousand needle-eyes a day, or more than a dozen a minute. The needles are next given their points by machines, which differ according to the kind of point, as "round," "twist," "diamond," etc. So far as shape is concerned the needles are now complete; but the softness of the steel up to this point makes them useless for practical purposes. They must therefore be hardened and tempered, and this in turn requires several distinct processes and opportunities for divided labor. Next they are sharpened and polished by a piece of machinery which holds nearly a hundred of them at once against a brass wire scratch-brush revolving 8000 times a minute, and afterward against a bristle brush. The eyes of the needles are then smoothed by stringing the needles on a cotton thread, covered with oil and emery, which is drawn back and forth at different angles to the needles so that the polishing powder acts on all parts of the aperture. Next follow finish pointing, — done on a fine emery, — and finish polishing, done by a revolving brush with crocus and alcohol. Counting and packing offer still further opportunities for divided labor, by which the utmost economy of energy is achieved.

The Advantages of Division of Labor. — It has been usual for economists to enumerate the advantage of the division of labor as follows: First of all, it secures (1) a gain or *saving in time.* This gain in time is twofold. (*a*) The workman does not have to pass so frequently from one operation to another, and (*b*) he can learn his special process in less time.

In the second place, division of labor secures (2) *a gain in skill.* In the third place, the system results in (3) *a gain in adaptation, by finding a place for everyone and putting everyone in his place.* The man who is physically or mentally strong can devote his whole time to work that is worthy of him, while the man who is weak in muscle or in mind can find work in which great powers would in part be wasted. In the fourth place, division of labor secures (4) *a gain by paving the way for invention.* The processes being rendered simple, the individual workman can make himself more familiar with them, and can therefore see where and how improvements can best be made. It therefore results that an ever increasing proportion of modern inventions come from the brains of the workmen. In this view of things, we may say that invention is becoming more and more a social process. Finally, division of labor secures (5) *a gain through a more complete utilization of capital.* Each workman, using one tool or one set of tools, or operating one machine, keeps the capital employed all the time.

Disadvantages of Division of Labor. — But division of labor has also its dark side. First of all, the system, by making possible and profitable the employment of women and children, (1) *often deprives men of their employment and leads to the exploitation of women and children.* In American cities, one may sometimes find fathers at home "keeping house," while their wives and children are working long hours in factories. In the second place, division of labor (2) *gives rise to a dependence of man upon man* that is often, at least in part, an evil. Thus a strike by a particular group of men in one business, — mining, for instance, — may throw out of employment not only all the other men in that business, but also thousands or tens of thousands of other men whose work depends upon the product of the industry in

which the strike occurs. The same sort of hardship results from division of labor when workmen too old to acquire a new trade are deprived of their usual employment by a change in the conditions or methods of production. Thus the invention of the typesetting machine threw tens of thousands of highly skilled and highly paid craftsmen out of employment. These evils, to be sure, right themselves in the long run; but, as one writer has keenly remarked, the long run is too long for the ordinary man, whose life is but a short run. And how long may be the run required in cases where children have been brought up in homes demoralized by the enforced idleness of the family head? A third evil connected with the system of divided labor is, that by it (3) *labor* often *loses its attractiveness and,* at the same time, *its educational value.* A workman who makes a whole watch can acquire such love for his work as makes him an artist; but who can learn to love the mere routine of putting metal disks under the face of a die for ten hours a day? "It is," as one writer has well said, "a sad thing for a man to have to testify that he has never made more than the eighteenth part of a pin."

III. The Organization of the Factor Capital

In the foregoing discussion of the organization of labor, it will perhaps have been noticed that the organization of labor is intimately associated with the organization of capital. That division of labor would never have developed without the organization of capital in the form of machinery which is characteristic of modern industry, is well illustrated in the description of divided labor in the needle industry. We need not concern ourselves further, therefore, with a separate consideration of the organization of capital, since

what has been said of the one applies with only minor changes of expression to the other. We may pass at once to consider the factor, land.

IV. The Organization of the Factor Land

Territorial Division of Labor. — To a certain extent the same is the case with the organization of natural agents as with the organization of capital. Labor is human effort applied to natural agents, usually aided by capital. Organization of labor, therefore, generally involves at the same time organization in the use of natural agents and capital. But there is one form of organization of production that is so generally conditioned by the factor, nature, that we may well treat it as a form of organization of the natural agents themselves. The two names most commonly applied to this form of organization are *localization of industries* and *territorial division of labor*. As with the division of labor, so with localization of industries, the tendency is toward increasing specialization of function, in the one case among persons, in the other among places. Thus the territorial specialization by which country districts supply the towns with food, receiving manufactured goods in exchange, — society thus dividing its labor into country work and city work, — resembles the primitive division of occupations, among savages, into man's work and woman's work. And the finer territorial specialization by which certain agricultural regions produce almost exclusively some one product or some few special products, while certain manufacturing centers similarly devote themselves to making some one commodity or some few commodities, may, in the same way, be likened to that form of division of labor which we have described at length.

The twelfth United States census disclosed many interest-

ing illustrations of territorial division of labor or localization of industry. Thus, more than half the gloves of the country, measured by their values, were reported as being made in the adjoining towns of Gloversville and Johnstown, in east central New York. Moreover, the value of the gloves manufactured was more than two-thirds of the total value of all products manufactured in the town in the case of Gloversville, and more than one-half in the case of Johnstown. Troy, New York, produced nearly three-fourths, in value, of all the collars and cuffs made in the country, and nearly seven-tenths of all the manufacturing workmen in Troy were engaged in this one industry. Philadelphia made over 45 per cent of the country's carpets. Nine-tenths of the wage-earners in South Omaha, Nebraska, were engaged in slaughtering and meat packing. The thirteenth census showed that territorial division of labor had progressed even further than in 1899.

Among the causes which lead to such localization of industry the following are probably most important: (1) *nearness to materials,* (2) *nearness to markets,* (3) *water power,* (4) *favoring climate,* (5) *local supply of the kind of labor needed,* (6) *local supply of investment funds,* (7) *the momentum given by an early start.* Inasmuch as most of these causes have to do with geographical considerations, rather than with labor, it will be understood why we have treated localization of industries as a form of organization of natural agents, rather than as a phase of the organization of labor.

Just as advancing civilization brings increased specialization or division of labor, so we may expect that the future will witness an ever growing specialization of industry on geographical lines. Increasing stability of governments, improved methods of rapid transit, the breakdown of interracial antipathies and prejudices, are making world markets possi-

ble, and with the world markets will come a condition of affairs in which every country and every section of every country will confidently produce to the utmost those goods in the production of which it enjoys the greatest relative advantage.

V. Conditions Determining the Organization of Production

We have already noted in passing one or two of the conditions upon which depends the efficiency of organization of production. It may be well to bring them together at this point and to speak at the same time of an even more important factor which conditions all production, no matter how organized.

1. *Extent and Character of the Population.* — Perhaps first in logical importance is the size and character of the population. The more numerous the consumers, the greater must be the supply of goods; and the greater the supply of any commodity, as a general rule, the more minute will be the organization which will be found economically profitable. This idea is often expressed in the statement that "*division of labor is conditioned by the extent of the market.*"

2. *Growth of Capital.* — The second great condition of the organization of industry is the growth of capital, whether in the form of machinery or in the form of means of transportation and communication and exchange. Improvements in machinery have made increased specialization and organization technically possible, while railways, telegraph and cable lines, and banks have widened the markets and have thus made such organization economically possible, that is, profitable.

3. *The Character of the Industry.* — Not all industries lend themselves equally to some of the kinds of organization that we have described, no matter what the population or the

extent of capitalization. Agriculture has hitherto in the main defied all attempts at minute division of labor. Manufacturing lends itself to division of labor in the highest degree. Without entering into a discussion of all the technical reasons for this difference, we may say that the main requirement, within the industry itself, for minute organization is that the different processes shall permit of being carried on simultaneously. We all know that this feature of industry is characteristic of manufacturing, and that, on the contrary, it is almost entirely lacking in the case of farming, in which dependence upon nature's changes necessarily results in *serial* processes.

4. *The Character of the Government.* — A fourth condition of efficiency of organization is the character of the government. Even the most advanced states differ in many ways in structure and in the legal conditions which they enforce, but all civilized states secure at least the following conditions of efficient organization: they all (a) *maintain the institution of private property;* (b) *protect life and property from enemies without and within the nation's borders;* (c) *create and maintain the institution of contract;* and (d) *participate directly in industry in cases in which it has been clearly proved that individuals will not act at all or will not act for the best interests of industry as a whole.* Thus, all civilized governments maintain coinage systems, regulate weights and measures, establish and care for docks, lighthouses, and roads, and maintain a consular service in foreign lands.

VI. Large-scale and Small-scale Production Compared

Modern times have witnessed a wonderfully rapid growth in the average size of the individual business. Indeed, the

change in the size of the business unit during the past half century is perhaps as striking as the change from house industry to factory industry in the second half of the eighteenth century. The movement has gone so far and is still proceeding so rapidly as to excite very general fear as to its social consequences. Certain dangers resulting from the consolidation of large competing corporations will be discussed elsewhere; but it is pertinent at this point, in connection with the subject of the organization of production, to advert briefly to the advantages claimed for large-scale production and, on the other hand, to economies open to small-scale producers severally or in coöperation.

Advantages of Large-scale Production. — The advantages claimed for production on a large scale resolve themselves into two general classes: (1) *economies in making goods,* and (2) *economies in marketing goods.* As to the first, it is claimed that in production on a large scale there is a saving in (*a*) *capital cost,* per unit of product, both *in fixed and in circulating capital;* in (*b*) *labor cost,* owing to the possibility of more efficient organization; in (*c*) *the possibility of making improvements,* both through the employment of special investigators and inventors, and through the comparison of methods in different departments of the same factory or in the same departments of different factories under the same ownership; in (*d*) *the cost of superintendence;* in (*e*) *the utilization of waste,* as is instanced by the Standard Oil Company and the large beef and pork packing companies; in (*f*) *providing their own aids to making and marketing,* — making their own cans, boxes, etc., and owning railways and steamship lines, etc. In businesses enjoying this last advantage, we have examples of *integration of industry* as well as of *concentration of industry.*

Among the second class of advantages claimed for large-

scale production, economies in marketing the goods, are the following: (*a*) *economy in securing trade,* through advertising and commercial travelers; (*b*) *economy in "carrying" stocks of goods,* a relatively smaller stock being sufficient to meet the fluctuations in demand; (*c*) *economy in getting goods to consumers,* through the power to secure better freight rates for large shipments, and through the power possessed by some concerns to avoid "cross freights," — that is, to ship goods always from the nearest point of supply and hence to avoid having shipments of the same class of goods pass each other on their way to consumers; (*d*) *economy in securing a foreign market,* through the greater power of the large concern to withstand the cutthroat competition common in "hard times."

Economies open to Small-scale Producers. — Against these advantages of large-scale production may be set the following considerations which seem to promise a continuation of a considerable measure of small-scale production, at least in certain lines of industry: (*a*) First of all, it is claimed by experts that in many lines of business *a plant of moderate size is the plant of really maximum efficiency* in regard to capital and labor costs. (*b*) In many cases the advantage of the large-scale business in the matter of concentration of power is neutralized by the fact that *modern invention,* especially in connection with electricity, *is revolutionizing the methods of distribution of power,* putting the small manufacturer more nearly on a level with his greater rival. (*c*) It is, furthermore, very doubtful whether large-scale producers can secure that *minute and economical supervision* which characterizes small-scale industry; whether, in other words, hired managers can compete in this regard with individual entrepreneurs who will reap all gains as they bear all risks. (*d*) The small producer has a distinct advantage in his greater *power to know the personal wants of his market.* In many in-

dustries the personal element plays so large a part that the small producer will for a long time be able to hold his own, even if he cannot oust the large producer from the field. Finally, *by coöperation of neighboring small producers, it is possible to secure* much the same *opportunities as to* (*e*) *invention and improvement of processes and* (*f*) *utilization of "waste"* that we have spoken of as regularly present in large-scale industry.

It must be borne in mind that our comparison has been between small-scale and large-scale production, not between small-scale production and monopolized production. Monopolized production is usually, though by no means always, production on a large scale. But production on a large scale is not at all the same thing as monopolized production. Had we been speaking of the production of monopolized goods, it would have been possible to add many to the list of alleged advantages or economies in production, and some of the advantages of which we have spoken would in the case of a monopoly have been much more marked and undisputed. Thus in the matter of "cross freights" and again in the case of advertising, many would admit advantages in the case of a monopoly who would deny that they accrue simply to large-scale production.

This whole matter of the relative advantages of small-scale and large-scale production has been of late days the subject of rather acrimonious debate, and can by no means be regarded as settled.

VII. Four Views as to the Right Relation of Society toward Trusts

Four views seem logically possible as to the right relation of organized society to the great industrial concerns which we have come to call by the misleading name Trusts.

First, there is the view that the big concern is in every way beneficent, in achievement and in promise, and that society should keep "hands off"; that those immediately interested in these businesses, in ownership and control, know better than the public can know how they should be managed, and that any social injury that selfish interest might inflict, — if such injury must be admitted as even a possibility, — would be less than the social injury sure, in this view, to result from the bungling of an ignorant and planless society. This view is found, sometimes expressed, more often implicit, in many great newspapers and other influential sources of public information, and is urgently and more or less successfully pressing for acceptance in the councils of American political parties.

The second view, representing another phase of our inherited ideas, is that Trusts are evil, and an unnecessary evil; that they have grown out of unscrupulous force and corruption rather than from economy; that, even though possible economic gains may be credited to them, yet such gains cannot for a moment weigh in the scale against the advantage the small industry has always secured as a training school in initiative, business morality, individual responsibility, — in short, business character. Those who hold this view propose, therefore, that the strong arm of society should reach out to tear apart these giant combinations of our day, and enforce among the smaller concerns resulting from the dissolution a competition like that "our fathers used to know." This view to-day has relatively few open defenders, but among its champions are men of the keenest intelligence and best tested public-mindedness. Its practical influence upon legislation and administration has been greater than the number of its advocates would lead one to predict.

A third view is that Trusts are primarily products of economy, though too often the economy has been reënforced by fraud and force; that the old small-business school of character must be supplemented — perhaps at some future day even be replaced — by new methods of training, evolved from the conditions of our own time and better suited to those conditions; that the economies of large-scale production can be and should be turned to the advantage of consumers through reduced prices rather than to the further enrichment of a few business supermen through enhanced profits; and that if society is not now wise enough or strong enough for the task, our ignorance and weakness must, at our peril, give way to intelligence and strength; that the rallying cry of America should be, not efficiency nor democracy, but efficient democracy. Those who hold this view therefore advocate a policy of active, constant, complete regulation, a policy that has gained rapidly in popular acceptance and in practical influence during the opening years of this century.

The fourth view — that of the Socialists — is like the third in asserting the economy and inevitability of "trustification." Socialists would go even further and claim that what has happened in a part of the industrial field is fated to occur universally. But to the socialist the proposal to regulate is a subject for pitying smiles or smiling pity. *Quis custodiet custodes?* If we can save ourselves at all, if we can secure for ourselves the economies of large-scale production, — the socialist calls it "socialized production," — we can do it through collective ownership and management, and in that way alone. Over sixty years ago, Karl Marx, the greatest figure in the socialist movement, saw or foresaw the tendency to concentration. His followers claim for his prevision or prediction the same sort of glory that the world

accords to the discovery of the planet Neptune, which was found where it is because by Leverrier's calculation it had to be there.

The four views here characterized may be summarized more briefly as follows: (1) *Trusts are inevitable, economical, and beneficent, and will be most beneficently and intelligently managed, if unregulated:* (2) *Trusts are not inevitable, economical, or beneficent, and hence should be compulsorily dissolved:* (3) *Trusts are inevitable and economical, but in the highest degree dangerous unless they are so regulated as to prevent abuse and to turn their economies to the advantage of the public:* (4) *Trusts are inevitable and economical, and will become universal; we cannot regulate them; we must own and operate them; if we cannot, democracy has failed.*

SUMMARY

1. Growth in the magnitude of industry has resulted in increased complexity of industrial organization.
2. The entrepreneur directs the organization of the factors, but his function is sometimes shared among many individuals.
3. Forms of organization of the factor labor are simple associated effort, division of occupations, and division of labor.
4. Organization of the factor nature gives rise to localization of industry.
5. The limits of profitable organization of industry are the size and character of the population, the amount of capital, the character of the industry itself, and the character of the government.
6. In some industries there are many advantages in production on a large scale. Against these may be set other features in which the small-scale producer may hold his own, or even enjoy an advantage.
7. There are four views as to the nature and origin of "trusts," and four views as to the proper attitude of organized society toward them.

QUESTIONS FOR RECITATION

1. How was coöperation of the factors secured before the Industrial Revolution? To what extent does this method obtain to-day in advanced nations?

2. Name some of the duties of an entrepreneur.
3. Name the different forms of business undertaking. Discuss them from the point of view of their relative strength and weakness.
4. How does division of occupations differ from division of labor?
5. State the advantages of the division of labor; the disadvantages; the advantages of large-scale production; the economies available to small-scale producers.
6. Why does not farming lend itself to the division of labor?

QUESTIONS FOR STUDY AND DISCUSSION

1. Is there any relation between the increase in the average size of business units and the recent establishment of schools and colleges of commerce, administration and finance, and the like?
2. Is there a relation between the development above mentioned and the rapid growth of trade-unions?
3. What is the official position, if any, taken by the different political parties with regard to trusts?
4. Does increasing division of labor furnish an argument for specialization in school and college education, or the contrary?
5. Does division of labor make for fullness of life and breadth of character, (*a*) directly; (*b*) indirectly?
6. Make a study of the wonderful division of labor in a Chicago *abattoir*.
7. Describe the processes under a system of divided labor in some industry with which you are acquainted.

LITERATURE

Ely, R. T.: *Monopolies and Trusts*, pp. 187–190.
Haney, L. H.: *Business Organization and Combination.*
Jenks, J. W.: *The Trust Problem.*
Report of the United States Industrial Commission, Vol. II.
Smith, Adam: *Wealth of Nations*, Bk. I, Ch. I.
Van Hise, C. R.: *Concentration and Control: a Solution of the Trust Problem in the United States.*

PART III. TRANSFERS OF GOODS

(EXCHANGE)

CHAPTER I

INTRODUCTORY

The Nature of the Subject. — We have now studied two of the main parts of economic analysis and theory. We have learned something regarding the consumption of goods, and also something regarding their production. We have now to study the question how and by what means goods are exchanged among men, and what determines the quantitative ratios in which they exchange. By the conditions of modern industry almost every man produces more of some one commodity or of some few commodities than he himself consumes; and, on the other hand, every man consumes very many goods which he himself has not produced. In other words, production to-day is almost entirely "for the market." This is possible only because men transfer goods from one to another. Such transfers of goods constitute a very great part of our economic life. The business of one important industrial class, that of merchants, consists in effecting such transfers. The operations in which merchants are engaged we call by the general name *commerce*. But commerce requires a multitude of other businesses to assist it, among which, especially prominent, are those of providing means of communication and transportation and exchange,

such as public roads, railways, telegraphs, telephones, and banks. These agents of commerce, while they do not confine their functions entirely to the assistance of merchants, do aid the entire community in bringing about desired transfers of goods.

Exchange. — Transfers of goods are of two kinds: they may be either *one-sided transfers*, as in the case of gifts, bequests, inheritance, taxes, and fines; or they may be *two-sided transfers*, as is the case with nearly all economic transfers with which we have to do.

The part of economics which we are about to study is by most economists called "exchange," because the term "exchange," referring to two-sided transfers, covers so many of the transactions that are the subject of our study. But since money and banks, which are to be treated in the present part of the book, are agencies in effecting one-sided transfers as well as two-sided transfers of goods, we have included the name "transfers" with the simpler word "exchange" to express more completely the nature of the subject.

Since exchanges of goods regularly increase the utility of the goods exchanged, it is evident that exchange is a part of production and might be treated under that general heading. But the phenomena of exchange are of a character so distinct and so important that it is considered better to treat them in a part by themselves.

Advantages of Exchange. — It is not uncommon even to-day to hear men talk as if an exchange of goods could benefit only one of the two exchangers. Sometimes, indeed, men speak as if what is gained by one party to an exchange, whether an individual or a nation, must be at the loss of the other. We do not stop to think that when we purchase a hat or a suit of clothes, we regularly profit by the trans-

action; but it is evident that if we did not think the thing purchased more useful to us than the money paid for it, we would not make the exchange. Let us study for a moment the reasons why men find it profitable to exchange. In the first place, (1) the *tastes and customs* which in part determine utility *vary* (*a*) *from nation to nation*, and (*b*) *from man to man*. It is evident, then, that when a commodity passes from an individual or a nation with little taste for it to one with a strong liking for it, the exchange increases the utility of the commodity. In the second place, (2) *different countries or different regions of the earth differ from one another in their* (*a*) *natural or* (*b*) *acquired advantages in the production of different commodities.* Goods that one country or one section can easily produce in abundance either because of superior natural advantages or because of the skill of its workers, derived from long experience, another country or section may be able to produce only with great difficulty. Thus, the planter of the South and the farmer of the Northwest can both profit by the exchange of the cotton of the one for the wheat of the other. In the third place, (3) *individuals* also *differ* from one another, either (*a*) *by nature or* (*b*) *by training, in their fitness for different kinds of work.* Thus, one man is especially fitted by nature or by training for carpentry, another for milling. In all such cases each individual will find his greatest advantage in doing that which he can best do, exchanging the surplus of his product for other goods which he desires but which others can produce at greater relative advantage or at less relative disadvantage.

The Machinery of Transfers. — In every modern nation there now exist on a large scale institutions and appliances for the furtherance of transfers. These may be briefly enumerated as follows: (1) means of transportation and communication; (2) systems of weights and measures; (3)

money and credit, banks of various sorts, clearing houses, and the like; (4) stock and produce exchanges; (5) commercial laws and commercial administration, including the assistance of consuls who act in part as commercial agents of their governments in foreign countries; (6) middlemen of all sorts, including retail and wholesale dealers. Inasmuch as exchange is a part of production, these instruments and agencies of exchange are also instruments and agencies of production. It is through them that goods receive the time, place, and possession utilities that fit them for final consumption.

SUMMARY

1. Transfers of goods are of two kinds: one-sided and two-sided. The latter are known as exchange, under which heading this general subject is often treated. Exchange develops the phenomena of value and price.
2. All exchange is regularly profitable to the two parties to the transfers, for the reasons that men and places differ in their natural and acquired aptitudes for different kinds of production, and that individuals and nations also differ in their tastes and customs in consumption.
3. Modern industry has developed an elaborate mechanism for its exchanges, including means of communication and transportation; systems of weights and measures; money and credit and banks; stock and produce exchanges; commercial laws and administration; middlemen of all sorts.

QUESTIONS FOR RECITATION

1. Give examples of one-sided transfers; of two-sided transfers.
2. State the advantages of exchange.
3. Mention some of the means of transportation; of communication.
4. What is the relation of exchange to production?

QUESTIONS FOR STUDY AND DISCUSSION

1. How would the adoption of international systems of weights and measures aid exchanges?

2. Does a fall in postage rates affect territorial division of labor?
3. Do children in a "shoe town" have a better chance than others to acquire skill in the shoe industry?
4. What are some of the sources of advantage in exchanges between the United States and Cuba? Between a lawyer and a doctor?

LITERATURE

Any standard treatise. See particularly:

Nicholson, J. S.: *Principles of Political Economy*, Vol. II, Ch. I, pp. 3–10.

CHAPTER II

VALUE

Meaning of the Term. — One of the most important and difficult problems in economics, and the central problem in transfers or exchange, as well as in distribution, is that of the determination of value. Why do goods exchange for one another in the proportions that they do? Why do the proportions in which they exchange vary from time to time? This is the problem we now have to study.

The Idea of Subjective Value. — First of all we must note that there are two closely related but distinct ideas of value, which have been called by the names "subjective value" and "objective value." Let us try to get an understanding of these ideas and of the relation between them. Our study of the law of diminishing utility has shown us that as our stock of any commodity increases, the marginal utility falls; that is, we care less for an additional portion of it. We satisfy our most intense wants first, and, as our stock increases, our unsatisfied wants grow less and less urgent. If, for example, we had but a very small amount of water, we should use it for drinking purposes only: a first increase might be used for bathing; a second, for washing dishes and clothes, and so on. The greater the stock, the less would be the importance for our welfare attaching to any unit of that stock; the less sacrifice would we undergo to get an additional gallon; and the less should we trouble

ourselves about the loss of a gallon. It is the marginal utility that determines the *economic importance* of any commodity in our estimation. These phrases, *capacity to excite desire, marginal utility, economic importance,* are commonly used as synonymous with the term "subjective value."

Subjective Use Value. — But if we inquire carefully into our own thinking, we shall find that there are *two processes of subjective valuation.* The very core and kernel of our thought on the subject probably lies in the idea that we form in our minds as to the importance for our welfare of a unit of any commodity, whether we have it in our possession or are merely thinking of our possible possession of it. Thus when we search our minds we find at least a rough estimate of the importance to us of each article of our clothing; of a ton of coal in the cellar; of an automobile or an aëroplane, though we may not own one; and so on throughout the range of things that have or might have a bearing on our economic life. This root or germinal idea of value, which is really the same as the idea of marginal utility, is to be distinguished from the *others* by the name *subjective use value,* which may be defined as *the economic importance of a unit of any commodity to the one valuing it.*

These estimates, these subjective use valuations, are essentially incommunicable. That is, we cannot convey them to the mind of another human being. To illustrate first from another field, we cannot tell another what "black" is to us. The physicist may establish the physical fact that black means the absence of light and hence of color; but you cannot by repeating the physicist's explanation communicate to the mind of a friend what idea or feeling the word "*black*" calls up in your mind. How would you try to impart the idea of black or blue or white to a man blind from birth? "But," you will perhaps say, "though I cannot

tell such a blind man what I mean by white, I can tell it to one who sees." Hold a moment. It must of course be admitted that when you tell a friend from the tropics that snow is white, the word white represents for you, at least in a general way, the same impression as that made by milk, clear-weather clouds, and the like, and that the word will also call up for your friend similar examples of whiteness. But have you any knowledge, can you know, that the color impression made by milk and clear-weather clouds — whiteness — is the same for you as for your friend? The fact is that in such a case you can communicate to another nothing but a comparison, implied without need of expression. And the same is true of our estimates of subjective use value. We cannot communicate them. When we try to do so, we find ourselves driven back upon comparisons. Thus, if you try to tell your friend how much you want a book, or a pair of hockey skates, you will find yourself falling back upon such a statement as this: "I would be willing to go without this or that for a whole year if I could have the skates," or "I would be willing to work for a month to get them." But you have not told your friend by this *how great is the absolute importance* to you of a month's time with the opportunity to do something else or to do nothing.

Subjective Exchange Value. — And this brings us to the second stage in the logic of valuation. Not only are we constantly valuing individual units of commodities by themselves, but we are also as constantly making comparative estimates among these. Hence results *subjective exchange value, the quantitative ratio between two subjective use values in the mind of the one who does the valuing.* Notice that although the word exchange is used in this name, it does not refer to any actual, objective exchange, but only to a mental process, to what might be called an imaginary exchange.

Subjective exchange values may be communicated to the mind of another. Thus when one says: "The gray horse is worth double the black mare," he may well mean that, for his own economy, the gray would have twice the economic importance of the black, though he does not, be it noticed, tell us, — he cannot tell us, — except in comparative terms, what would be the importance to him of either the gray or the black.

Objective Exchange Value. — We are now prepared for the third stage in the development of the process of valuation, — for the idea of value that is most frequently in mind when men use the word, *i.e. objective exchange value.* Let us suppose that two men meet each other, both cut off from society indefinitely, and both stocked with provision of the same goods, which for simplicity we may suppose reduced to two, bread and coffee. Let us suppose further that for one of the two men, John Doe, the subjective use values of his coffee and bread are represented by the numbers 8 and 1, for pound of coffee and loaf of bread respectively; and that for the other man, Richard Roe, the subjective use values are respectively 10 and 2. We have already explained that no man can communicate to another absolutely his subjective values, and we cannot, therefore, — except by the proverbial story teller's license of omniscience as to the minds of his characters, — presume to know that a loaf of bread has for John Doe a value 1 and for Richard Roe a value 2. But they might stand in that ratio, and here, for illustration's sake, we assume that we know them so to stand.

Now, on the basis of the figures as given here, it might be concluded that John Doe and Richard Roe could not swap, since Richard Roe is credited with higher subjective use values of both commodities. In other words, we assume that Roe wants both another loaf of bread and another

pound of coffee more than Doe does. But further consideration will show such a conclusion to be in error. If Doe wants another pound of coffee eight times as keenly as he wants another loaf of bread, while Roe wants another pound only five times as keenly as he wants another loaf, Doe is *relatively overvaluing* coffee and Roe is *relatively overvaluing* bread. Both will therefore gain from an exchange. Doe will give up part of his bread for part of Roe's coffee. As each finds his stock of one commodity increasing and his stock of the other correspondingly decreasing, the subjective use values and the subjective exchange values of each man will change to correspond to the changing stage of his provision. John Doe's ratio stood before at 8 : 1. As exchange continues, the first term of his ratio will fall, the second rise. Richard Roe's ratio stood at 10 : 2. As he parts with coffee for bread, the first term of his ratio will rise and the other fall.

How long will the exchange continue? The answer to this question is already implied in what has been said above, — *exchange must,* economically, *continue until the ratios become the same for the two men,* somewhere between 8 : 1 and 5 : 1 (*i.e.* 10 : 2). It cannot be asserted with certainty, or even probability, that the resulting ratio of equilibrium will be the half-way point, or $6\frac{1}{2}$: 1, since it is very improbable that the increase and decrease of stock will have the same significance for the two men. All that we can assert with certainty is that exchange will stop when the *subjective exchange values of bread and coffee — not the subjective use values* — have become the same for the two men.

In the two earlier ideas of value, we were dealing only with mental processes, with things going on in the minds of men. Now we have reached an idea of value that is represented by actual *physical phenomena.* Bread and coffee are being exchanged. We can count the loaves and weigh the

coffee. What we have written about the states of mind of Roe and Doe was to explain why and how the exchange took place, to show the relation of subjective value to objective exchange value. But we need not have been mind readers to understand the second of these two. If we had heard them say no word, we should still know the objective exchange value, if we could count the loaves that Doe passed over to Roe and the pounds that Roe passed to Doe. If, for instance, we find that 40 loaves of bread and 6 pounds of coffee change possession, we know that *in that market, at that time,* the objective exchange *value of bread* per loaf is $1 : 6\frac{2}{3}$ in terms of pounds of coffee, and conversely that the objective exchange value of coffee per pound in terms of loaves of bread is, $6\frac{2}{3} : 1$, *i.e.* $6\frac{2}{3}$. *Objective exchange value is the quantitative ratio in which goods or services actually exchange.*

Whenever two or more minds, entertaining different subjective exchange values, meet, the meeting of their minds constitutes a market; in that market differences in subjective exchange values disappear by exchange, and the ratio of the exchange is the then objective exchange value in that market.

Value and Price. — In our illustration we have chosen a case of barter, because here as in most cases it is easier for the mind to grasp the real character of the transaction when freed from the more complex idea of money. A sale of goods for money may, it is true, be regarded as a direct act of barter, money being thought of for the moment as like any other commodity. But in a more fundamental view, money merely mediates a barter in which one-half the transaction is postponed. That is, in selling goods for money it is as though we had taken butter or eggs to a country store, possibly reserving to a later time decision as to what goods we should receive in exchange. Every act of exchange,

whether for money or for other goods, registers a value; but when we name values in terms of money value, we use the specific name price. *Price*, then, *is* simply *value expressed in terms of money*. Value is the *genus*, of which price is the best known *species*.

What is a Market? — For the sake of simplicity, we have illustrated the origin, cause, and nature of exchange by an assumed economic meeting of *two* men. The form of our illustration has a further value, then, if it leaves sharp in the mind the impression that not more than two minds meeting are necessary to the idea of a market, — a fact which we are likely to forget or fail to understand because most markets represent the meeting of many minds. In the bigger, more active markets, values are held fairly steady because so many minds there meet.

Our physical presence is not needed to constitute a market. Through the post office, the telegraph and telephone, and the "wireless," men's minds may be projected into many scattered markets for many commodities, without need that their bodies should follow. Thus, for example, the market for securities is much broader than the mere rooms in which the brokers of London, New York, and many other cities meet for their transactions. It is made up of millions of clients or possible clients scattered throughout the world. If at any moment the price of any security represents a different ratio to other goods from that which is in the mind of a certain observant citizen in Redlands, California, he can, by telegraph, buy or sell that security until, by increasing or decreasing his stock of that security, and correspondingly decreasing or increasing his command over stocks of other goods, he brings his subjective exchange valuation to an equality with that of the world as expressed in the market.

Of course few markets are so open and wide as the one just cited. Gold beyond question may be said to have a world market. While wheat has a more limited market, its market is so widely international that, to the European and American, at least, it seems like a world market. Of many things it could not be said with practical truth that they have a world, or even a nation-wide, market. The extent of any particular market must be discovered from a study of its particular condition, always remembering what it is essentially that constitutes a market.

Market and Normal Value and Price. — Let us recur once again to our illustration. We now call attention to the fact that, to use the language of certain advertisements, "no questions were asked" as to the origin of Roe's or Doe's stock of bread or coffee. We take special care to emphasize this because an important economic distinction is based upon it. *When we are inquiring what value or price will be registered in any market at any time, assuming only that we know what different quantities will be offered and demanded at various prices, without inquiring why such offerings will be made at those particular prices, we are concerned with the problem of market value* or *market price,* which, as we have explained in other language, *is always determined at the point at which demand and supply are in equilibrium,* — in other words, *at the point at which the greatest number of exchanges can be effected in the existing state of supply and demand.*

When, on the other hand, we begin to inquire where the stock came from, with what ease or difficulty it was brought to market, etc., it is obvious that we ask the question only because the answer will throw light on the probable future supply and the resulting future price. And when we seek to understand, not what is the value or price at any

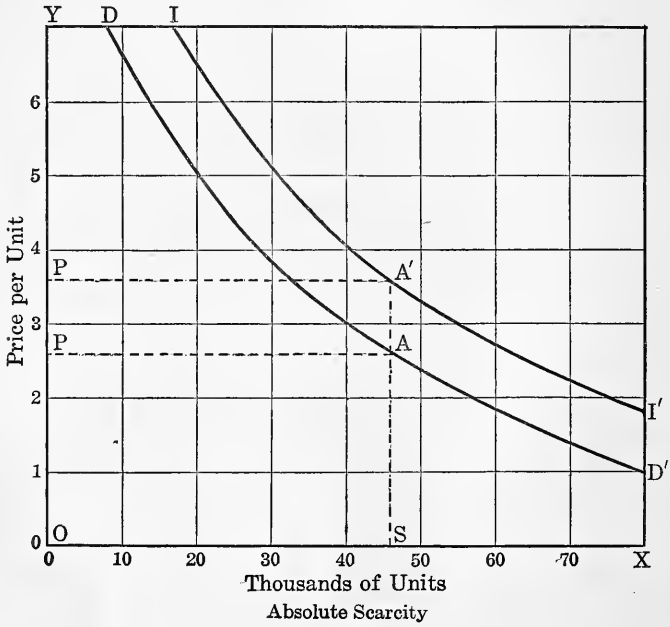
moment or for any short period, — within which the stock is little subject to increase, as for example a crop season, — but rather the *ideal value or price likely to be realized or at least approximated in any period within which known conditions of supply will have opportunity to be reflected, we are shifting our inquiry* from the problem of market or short-time value or price *to that of normal or long-time value or price. Normal, or long-time, value or price, then, is that ideal value or price — not necessarily measured by a long-time average of actual prices — around which market values or prices fluctuate, and to which they tend constantly to approximate for any period within which any one set of conditions of supply may be expected to exercise a dominating influence.*

Normal Value further considered. — It is apparent that a study of normal value involves a study of the conditions under which various classes of commodities reach the market, *i.e.* the conditions of supply. The first result of an analytical study of these conditions is the discovery that goods can be classified, from this point of view, into three groups: (1) *absolutely scarce goods;* (2) *monopolized goods;* (3) *competitively produced goods.* To shorten our terms, we may describe the differing nature of the scarcity of the three classes by the phrases, (1) *absolute scarcity;* (2) *monopoly scarcity;* (3) *cost scarcity.* The meaning of these terms will appear more clearly in what follows.

The Value of absolutely Scarce Goods. — It should be clear now that determination of the normal value or price of absolutely scarce goods, such as 1804 silver dollars, or metal occurring only in some fallen meteor, does not differ significantly from the determination of their market value or price. Supply being fixed, we may say, with a rough sort of practical truth, that their value — normal or market — is fixed by demand. As Professor Marshall happily illustrates, it is

as though, when one blade of a pair of shears is fastened and immovable, we were to say that the cutting is done with the moving blade.

A diagram may help the student to fix the matter in mind. Let *OY* be the axis of price or value, and *OX* the axis of quantity, and let *DD'* represent the state of demand for the commodity, since, as *DD'* illustrates, the demand price, as measured by the vertical distance between *OX* and *DD'*, falls with every increase in the imagined offering, as measured by the distance from *O* along *OX*. Then if the quantity of the commodity assumed to be on the market is fixed, the stock may be represented by the distance *OS*, in which case the value must be represented by the vertical line *AS*.



If we represent now an increased demand for the commodity by the curve II', it is clear that the new price would be represented by $A'S$.

Monopoly Value or Price. — In the case of monopoly, supply rests on the will of the monopolist, as determined by economic considerations. Since monopolies and monopoly value form the subject matter of the next chapter, we omit any further treatment of the topic here, except in connection with the explanation of competitive cost value, which is to follow.

Normal Value of competitively Produced Goods. — We need not here inquire to what extent competition is actual in the production and sale of goods in the modern industrial world. Even though it should be admitted that every branch of industry shows traces, large or small, of monopoly or of absolute scarcity, it is sufficient for our purpose to insist that, in a great part of present-day industry, some measure of competition is present to influence price policy. In considering the question of the determination of normal value or price under competition, we are really asking the question: *How would price and value be established if competition were perfect?* The answer to this question we can use in deciding for ourselves how the price or value is actually established in any given industry, according to the relative influence of absolute scarcity, monopoly, and competition upon that industry.

Now, when we take up the study of normal value or price, we find that here, as in all other cases of value, it is the demand of society that first of all determines the value or price. The laws of demand have been given elsewhere and explained. Let us illustrate this by numerical examples and by diagram. We may assume that in any given period society's demand for a certain commodity is as follows:

For	1,000,000	units,	society	will	pay	per unit	$2.00
"	2,000,000	"	"	"	"	"	$1.25
"	3,000,000	"	"	"	"	"	$0.75
"	4,000,000	"	"	"	"	"	$0.50

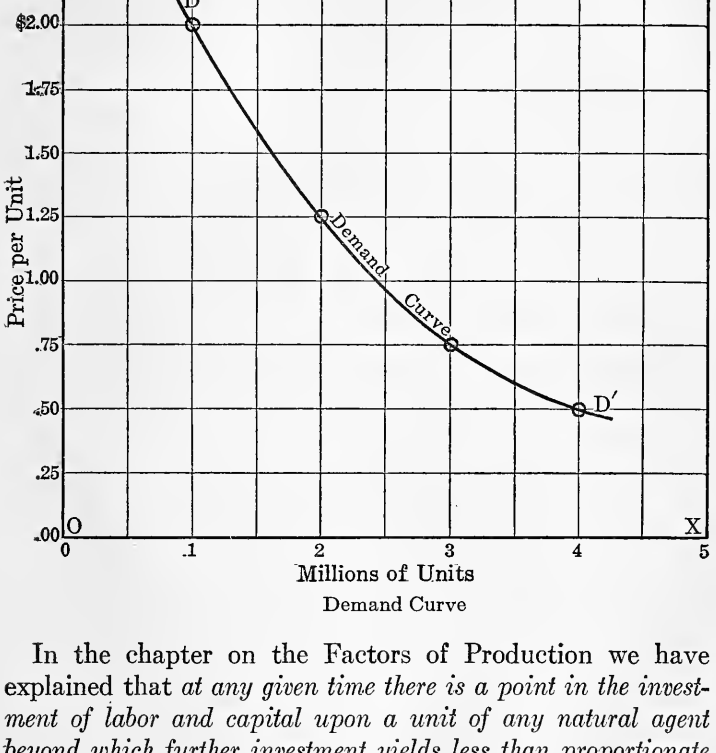
and so, consistently, for other prices and quantities beyond and within these limits. It is, of course, obviously impracticable to take space for a table that would give a complete picture of demand. The accompanying diagram is here used to represent graphically the same assumed state of demand.

As in our other figures, quantity is here measured along the *OX* axis, *i.e.* by distance from *OY* toward the right. The marginal intensity of desire, or rather the marginal intensity backed by purchasing power and measured in purchasing power, is represented by vertical distance above the *OX* axis, as registered along the *OY* axis. These two elements, quantity and marginal utility, are interdependent variables. The greater the quantity, represented by horizontal distance toward the right from *OY*, the less the marginal utility, represented by vertical distance upward from *OX*. Hence the character of the line *DD'* which represents the state of demand here assumed. It will be clear to the student on consideration that *DD'*, as a demand curve, might have been drawn more nearly horizontal, and indeed that it might have been given any slant or combination of slants, representing other possible states of demand, *provided only* that it be drawn to represent a continually *diminishing marginal utility* for every increase in quantity.

With the table and the graph in mind, we are prepared to note that, in a very real fundamental sense, the purchasers always fix the price or value. In other words, it rests with society to say, *for any quantity offered,* what it will pay for a unit of that quantity.

But price, though it is in every case determined by society,

depends, as just said, upon the quantity offered, and we must therefore now consider how the quantity offered in the market is determined, on the assumption of perfect competition.



Demand Curve

In the chapter on the Factors of Production we have explained that *at any given time there is a point in the investment of labor and capital upon a unit of any natural agent beyond which further investment yields less than proportionate returns.* If, then, we take the case of any commodity competitively produced, in which a natural raw material plays a determining part, it is evident that each producer and all

the competitive producers taken together will be subject to this law in putting their commodity upon the market.

Let us illustrate such a situation again by numerical example and by a graph, and let us assume that the commodity is the same one for which we prepared above a *schedule* and a *graph* of demand. Let us assume that the thousands or even millions of producers of actual experience are here represented by four producers, A, B, C, D, and that the expenses of production of these producers are severally as follows:

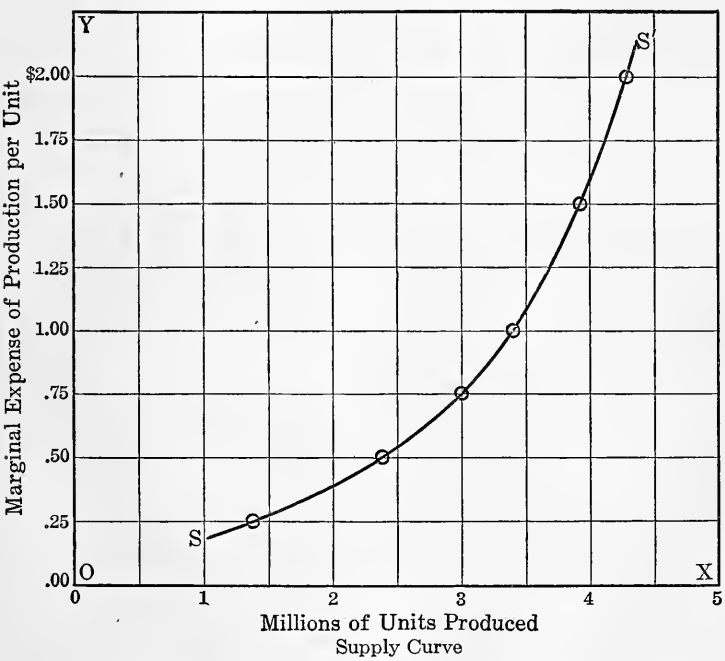
A	can produce	150,000	units	at a unit expense of			$0.25
	an additional	100,000	"	"	"	"	$0.50
"	"	50,000	"	"	"	"	$0.75
"	"	30,000	"	"	"	"	$1.00
"	"	40,000	"	"	"	"	$1.50
"	"	10,000	"	"	"	"	$2.00
B	can produce	300,000	units	at a unit expense of			$0.25
	an additional	200,000	"	"	"	"	$0.50
"	"	100,000	"	"	"	"	$0.75
"	"	50,000	"	"	"	"	$1.00
"	"	60,000	"	"	"	"	$1.50
"	"	50,000	"	"	"	"	$2.00
C	can produce	400,000	units	at a unit expense of			$0.25
	an additional	300,000	"	"	"	"	$0.50
"	"	200,000	"	"	"	"	$0.75
"	"	120,000	"	"	"	"	$1.00
"	"	150,000	"	"	"	"	$1.50
"	"	140,000	"	"	"	"	$2.00
D	can produce	500,000	units	at a unit expense of			$0.25
	an additional	400,000	"	"	"	"	$0.50
"	"	300,000	"	"	"	"	$0.75
"	"	200,000	"	"	"	"	$1.00
"	"	250,000	"	"	"	"	$1.50
"	"	200,000	"	"	"	"	$2.00

Combining these tables we get a supply schedule for all the assumed producers as follows: —

VARYING MARGINAL EXPENSE FOR DIFFERENT SUPPLIES

1,350,000	at a	marginal	stated	expense	of $.025
2,350,000	"	"	"	"	" $0.50
3,000,000	"	"	"	"	" $0.75
3,400,000	"	"	"	"	" $1.00
3,900,000	"	"	"	"	" $1.50
4,300,000	"	"	"	"	" $2.00

This table, or *supply schedule,* may be represented graphically as follows: —

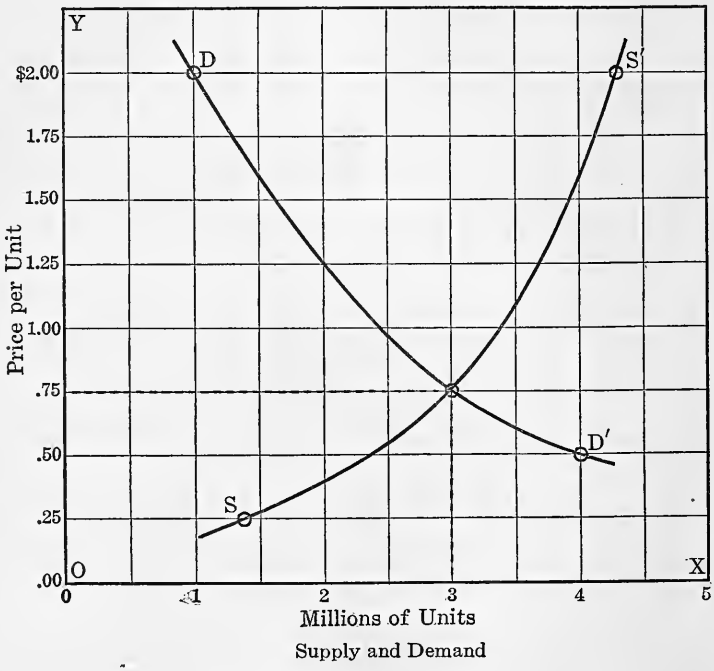


Supply Curve

As in the graph of demand, quantity is here measured by horizontal distance to the right from axis *OY*. Here vertical distance above *OX* measures the *marginal expense*

of production, in terms of the money unit. *SS'* therefore describes the combined movement of the interdependent variables of quantity and marginal expense.

And now let us superimpose the graph of supply upon the graph of demand as given above: —



Supply and Demand

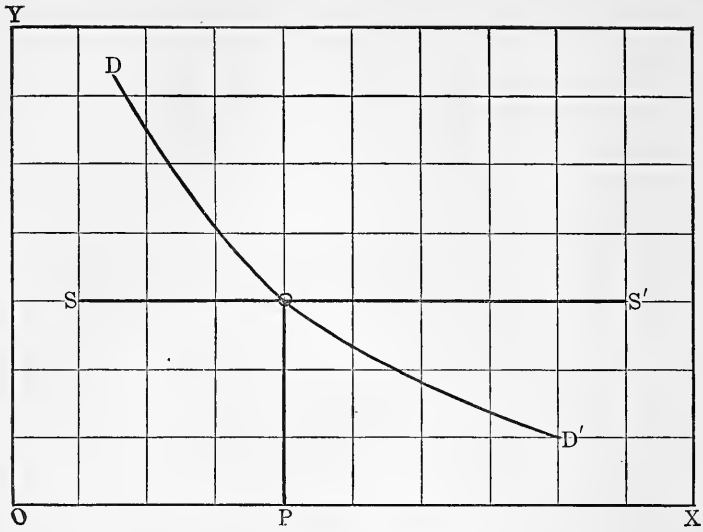
The graph here pictures what a comparison of the demand and supply schedules shows, that at $.75 a unit 3,000,000 units can be produced, and that at the same price of $.75 a unit the market will take 3,000,000 units of the commodity.

At this price each of the four producers is repaid for his expense in producing even his most expensive units. Here again we have had to simplify our problem unduly by taking the *average expense* of a large number of *additional units,* as the marginal expense or the expense of the last unit. But the simplification is not at the expense of the truth we are here merely illustrating.

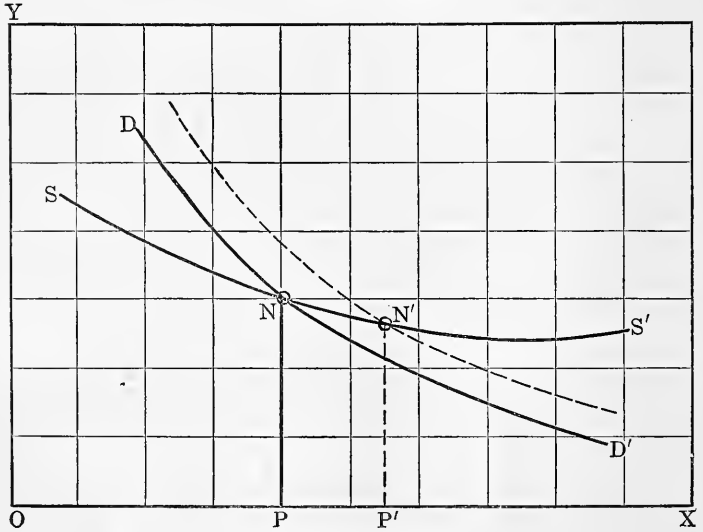
Under the conditions we have here assumed, *the normal supply* of this commodity is 3,000,000 units, because that *is the quantity which can be produced and put upon the market at a marginal expense not greater than society will pay for such a quantity,* and $.75 is the normal value and price, because at $.75 society will take just that quantity which can be produced at a marginal expense of $.75.

In discussing market price, we concluded by saying that market price is determined at the point of equilibrium of demand and supply. In the case of normal or long-time price of competitively produced goods, we can go a step farther and say that the *normal value or price is that value or price which brings into equilibrium the diminishing marginal utility with the marginal expense of production.*

We have taken for our illustration a product subject to the law of diminishing returns. The following graphs illustrate in like manner the determination of competitive normal price on the assumption: first, that the marginal expense does not change with changes in the quantity produced, *i.e. under conditions of constant expense,* — and second, that the marginal expense diminishes with increase in quantity of total output, *i.e. under conditions of decreasing expense or increasing returns.* The second graph also illustrates the effect of increased demand upon price under the same condition of supply.



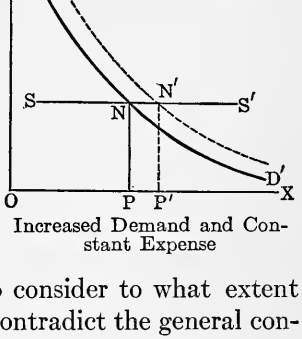
Constant Expense



Decreasing Expense

With such tables and graphs as we have here given in illustration, the student may, if he will, find or illustrate many curious and interesting facts about value. Thus, to take but a single case, let us draw a graph to illustrate the effect of increased demand upon the normal value of a commodity, assuming the expenses of production to remain constant.

Explanation of these diagrams is purposely omitted.



Increased Demand and Constant Expense

It is usual to conclude a discussion of the determination of competitive normal value with an explanation of certain actual conditions which in one way or another qualify the theory as here given and explained. We prefer merely to name some of the most important of these influences, leaving it to the student to consider to what extent and in what way they qualify or contradict the general conclusions above derived and explained. Chief among such "*frictional elements*," as they have sometimes been called, are *custom, immobility of labor and capital, unequal taxation, planless production,* and "*by-products.*"

In the following chapter we shall take up the problem of monopoly value or price, after first explaining what monopoly is and how it differs from competition.

SUMMARY

1. The term value in economics has various but related meanings.
2. Subjective use value is the economic importance of a unit of any commodity to the one valuing it.
3. Subjective use values are incommunicable.
4. Subjective exchange value is the quantitative ratio between two subjective use values in the mind of the one who does the valuing.

5. Exchange results from differences in subjective valuations.
6. Whenever two or more minds, entertaining different subjective exchange values, meet, the meeting of these minds constitutes a market; in that market differences in subjective exchange values disappear by exchange, and the ratio of the exchange is the objective exchange value in that market.
7. The word value, standing alone, usually means objective exchange value, — the quantitative ratio in which any two goods or services are exchanged.
8. Price is objective exchange value expressed in terms of money.
9. Market value is the actual value in any market at any moment of time; it is always determined at the point where demand and supply are in equilibrium.
10. Normal value is the ideal value toward which market values tend during any period within which known conditions of supply can exercise a dominating influence.
11. Goods may be classified from the point of view of their supply, as absolutely scarce goods, monopoly goods, and freely produced goods.
12. The normal value of absolutely scarce goods may be said to be determined by demand.
13. Freely produced goods may be increased in quantity: (1) at an increasing unit cost; or (2) at a constant unit cost; or (3) at a decreasing unit cost.
14. In every case the normal value will stand at the point where marginal utility equals marginal cost.
15. So-called frictional elements, — which obscure or modify the general principles of value, — include custom, immobility of labor and capital, unequal taxation, planless production, and "by-products."

QUESTIONS FOR RECITATION

1. Define subjective use value; subjective exchange value; objective exchange value; price; market.
2. Show the relation of the three ideas of value just defined.
3. Distinguish the three conditions of supply of goods.
4. Distinguish the three conditions under which the supply of "freely produced" goods may be increased.
5. Draw a graph to illustrate (*a*) social demand; (*b*) supply of a commodity produced at constant cost.
6. At what point is market price determined? normal price of freely produced goods?

QUESTIONS FOR STUDY AND DISCUSSION

1. What is the derivation of the word value? What are some of the meanings of the word outside of economics? Is there any common content of all the uses?
2. Is friendship or love capable of subjective valuation? of objective valuation?
3. Name some absolutely scarce goods; monopolized goods; freely produced goods.
4. Name some goods that are produced under conditions of increasing cost; decreasing cost.
5. Is a universal rise in subjective use values conceivable? in subjective exchange values? in objective exchange values? in prices?
6. How does an increase of demand for cotton affect the price of cottonseed oil? How would you expect to see the price of gasoline oil affected by a considerable reduction in the price of automobiles?
7. Is mutton or wool the by-product in sheep-growing? Is the case everywhere the same?

LITERATURE

Clark, J. B.: *The Distribution of Wealth*, Ch. XIX.
Jevons, W. S.: *Theory of Political Economy*, Chs. III and IV.
Marshall, A.: *Principles of Economics*, Bk. V, Ch. III, 5.
Smart, W.: *Introduction to the Theory of Value*, Chs. V and X.

CHAPTER III

MONOPOLIES AND MONOPOLY VALUE

In the preceding chapter we reached the conclusion that in the case of goods freely produced under competitive conditions, value is determined or fixed at the point where the marginal cost equals the marginal utility of the supply. At the same time it was pointed out that not all goods are thus produced. The largest and most important class of such exceptional goods consists of those produced by monopolists. In order to complete our theory of value, therefore, we must now inquire how monopoly value is determined; and, that we may do this the more understandingly, let us first see what monopoly is.

Definition and Classification. — It will be well for the student to study carefully the following definition, weighing deliberately the several words and phrases: *Monopoly means that substantial unity of action, on the part of one or more persons engaged in some kind of business, which gives exclusive control, more particularly, although not solely, with respect to price.*

Writers on the subject of monopoly have made many classifications, varying with the point of view from which the classification is approached. The following, which is rather a classification of the sources of monopoly power than of monopolies, will, it is believed, prove especially helpful in explaining the origin and real nature of actual monopolies.

A. Social Monopolies.
   I. General Welfare Monopolies.
      1. Patents.
      2. Copyrights.
      3. Trade-marks.
      4. Public consumption monopolies.
      5. Fiscal monopolies.
   II. Special privilege monopolies.
      1. Those based on public favoritism.
      2. Those based on private favoritism.
B. Natural Monopolies.
   I. Those arising from limitation of supply of raw material.
   II. Those arising from peculiar characteristics of the business itself.
   III. Those arising from secrecy.

Social Monopolies. — Businesses are social monopolies *in so far as they are made monopolies not by their own characteristics, but either by legislative enactment or by forming so close a connection with great natural monopolies that they partake of the nature of the latter.*

In old times kings and queens frequently granted exclusive business privileges to favored persons, and permitted no one except those named to engage in such undertakings. Such monopolies, however, became so odious that sovereigns were compelled to cease granting them. Governments still create exclusive privileges by *patent* and *copyright* laws, but they do so in behalf of the general public. Authors and inventors are given exclusive rights over their productions for a limited period. These monopolies are believed to have justified themselves through the stimulus which they have given to invention and authorship. Yet it must

not be forgotten that all intellectual achievements are in part a social product, — that they are due in great measure to earlier achievement. The telephone was preceded by a century of scientific invention and discovery along the line of sound transmission, and most of that investigation was very ill rewarded. On the whole, experience seems to justify the conclusion that patents and copyrights are beneficial, but that patents do not rest on so strong a basis as do copyrights, since no two persons could ever write precisely the same book.

The *trade-mark* is a legal monopoly similar to the patent and the copyright, and, in fact, is itself a copyright. It is given a separate place here because of its peculiar importance in modern business. In connection with lavish advertising, trade-marks in recent days have been made the basis of enormous profits.

Public consumption monopolies and fiscal monopolies call for a word of special comment. They can be distinguished only by knowing the object which the government has in view in establishing them. *If the government manages for itself or grants to another a monopoly* of the liquor traffic *with the object of regulating the consumption, the monopoly is a public consumption monopoly. If,* on the other hand, *the chief object is* not regulation but *income, the monopoly is* a *fiscal* one. Often the two objects are so blended that it is difficult or impossible to name the resulting monopoly.

Our classification names two kinds of special privilege monopolies. Those monopolies that are due to special tariff advantages or to other legislation are rightly said to be *based on public favoritism.* The other class of special privilege monopolies consists of those that grow up through special favors granted by other monopolies, especially natural monopolies, such as railways.

Natural Monopolies. — Natural monopolies are *those that depend for their existence on circumstances or conditions within the businesses themselves rather than on the will or consent of society.* They grow up independently of the social will and desire and sometimes even in direct opposition to it. The words we have used in our classification will sufficiently explain the different sources from which they arise. By far the most important of all monopolies are those of the second class of natural monopolies, chief among which are the following: wagon roads and streets, canals, docks, bridges and ferries, waterways, harbors, lighthouses, railways, telegraphs, telephones, the post office, electric lighting, waterworks, gasworks, street railways of all kinds. The peculiar characteristics that always give rise to monopoly of this class are indicated in the following statement: *Whenever there is a decided increment in gain resulting from combination, there results a tendency to monopoly which overcomes all obstacles. This decisive increment of gain from combination is always present in businesses* (a) *that occupy peculiarly favorable spots or lines of land, and* (b) *that furnish services or commodities which must be used in connection with the plant.*

Of late years many economists have argued that monopoly may *naturally* arise without any of the advantages here indicated, through the superior power of great capital and the superior economy of great concentration. They would call such monopolies *capitalistic.* There is not space to give all the reasons for dissenting from this conclusion regarding so-called capitalistic monopolies. One or two very cogent reasons may, however, be stated. An exhaustive study of the cases cited in support of this alleged tendency to monopoly has failed to reveal a single one in which the monopoly did not enjoy one or many of the monopoly advantages that

we have already mentioned and explained. Moreover, many cases in which the possession of large capital seemed on the surface to be a dominating influence have been cases in which the monopoly was so short-lived as to furnish little support to the argument of those who cited them. After all, whatever may be the advantage conferred by large capital, we must remember that capital is so plentiful that one gigantic plant can always find a rival whenever a slight margin of profit invites its establishment.

Our conclusion, then, may be stated as follows: There is a great and growing field of industry in which competition is not natural or permanently possible, for reasons explained in the text; there is another field within which monopoly may easily be engendered by unwise social action, and which is likely to become narrower as the nation grows in intelligence and thoughtfulness; and finally there is a third field within which natural monopoly does not and cannot exist, and within which social monopoly is unlikely to arise.

The First Law of Monopoly Price. — And now, having seen what monopoly is, we may attempt an answer to the question, How is monopoly value or monopoly price determined?

First of all, we may say that monopoly value, like all objective exchange values, is determined by the relation between demand and supply, and that demand is here as elsewhere determined by marginal utility. The supply, however, is not here determined as under competition at the point of marginal cost, but *at the point where the monopolist will secure the maximum of net revenue possible in the existing state of demand.* In other words, *the monopolist, freed from competition and governed only by the consideration of demand, is able to adjust supply to demand in such a way that the price will stand at the point of highest net return. This may be*

called the law of monopoly price from the point of view of supply. In determining what quantity shall be supplied and hence what shall be the resulting price as fixed by the demand of the public, — in other words, what is the point of highest net returns, — the monopolist consciously or unconsciously proceeds according to the following principles: —

1. He realizes that every increase in the offering of his monopolized product will result in lowering the marginal utility, and hence the demand price of the product, while every decrease in the offering will result in a higher marginal utility, and hence a higher price.

2. Of the expenses of production there are some that vary in their aggregate in almost regular proportion with the variation in the supply. Thus if the product is doubled, the total cost of raw material will be just about doubled. Such expenses are called *variable expenses.*

3. Other expenses, within certain limits, remain more nearly the same in their aggregate, no matter what the amount of the product. These, called the *fixed expenses,* would include the cost of plant, salary of superintendent, interest on bonds, etc. The student should note that the expenses here called *variable* are variable only *in their aggregate,* the expense per unit being rather constant or invariable while those expenses that are called *fixed* are really variable for the unit of product, being *constant or fixed only in the aggregate.* Thus, while *the total expense* represented by bond interest is fixed or invariable, and is classed under fixed expenses, the amount of interest chargeable to any unit of product decreases with every increase of output.

It follows from the above principles that the monopolist, since he is seeking the maximum net revenue from his business, will pay no attention to fixed charges in establishing the price of the product, but will consider only the variable

expenses in connection with the probable demand for his goods at various prices.

An Illustration. — We may illustrate by an example the operation of these principles. The following table shows in parallel columns the number of sales of a monopolized good at different prices: the total resultant earnings; the variable expenses; the fixed expenses; the total expenses; and finally the net revenue or monopoly profit: —

Price per Unit	Number Sales	Total Earnings	Variable Expenses per Unit	Total Variable Expenses	Fixed Expenses	Total Expenses	Net Revenue
$.10	600,000	$60,000	$.03	$18,000	$50,000	$68,000	−$8,000
.09	800,000	72,000	.03	24,000	50,000	74,000	− 2,000
.08	1,200,000	96,000	.03	36,000	50,000	86,000	+10,000
.07	1,800,000	126,000	.03	54,000	50,000	104,000	+22,000
.06	2,500,000	150,000	.03	75,000	50,000	125,000	+25,000
.05	3,500,000	175,000	.03	105,000	50,000	155,000	+20,000
.04	5,000,000	200,000	.03	150,000	50,000	200,000	+ 0,000

Study of the table will show why, in the case assumed here, the monopoly price will stand at six cents. Competition, if it were present, would keep on increasing the supply as long as normal profit could be obtained. In our illustration the lowest price at which production could be carried on would be four cents; and four cents would therefore be the competitive price or the price determined by the balancing of marginal utility against marginal cost of production, assuming that the weakest competitor in the business would merely be repaid for all expenses incurred. Other competitors, more efficient, and therefore producing a large part of their product at less expense, could still derive a profit at this price. But since the monopolist has such control over the production that he can control the offering to

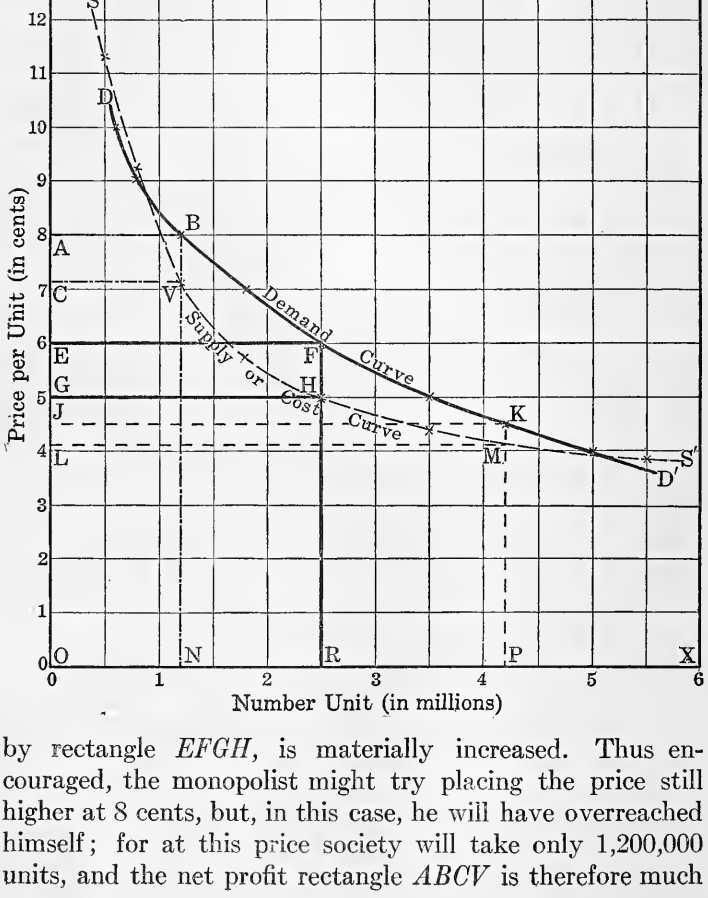
the market, he will cut off production at 2,500,000 units, at which point the marginal utility, and hence the demand, will fix a price of six cents, and will give the largest net return, $25,000.

The student may be interested in seeing the facts shown in the above table presented in graphic form. This illustrates only one of several possible cases, that in which the monopolist is producing a commodity, the making of which falls under the law of decreasing costs per unit as the output is increased. Such a condition is most favorable to the establishment of monopoly. But monopoly can also exist under conditions of constant and increasing cost per unit.

The diagram on page 212 shows the gross sales, total expenses, and net profits which would result at three different prices at which the monopolist might choose to sell the product. If the monopoly fixes the price at $4\frac{1}{2}$ cents, its total sales would equal the area of the rectangle *JKPO*, while its total expenses of production would be represented by the rectangle *LMPO*. Similarly, at the selling price of 6 cents, rectangle *EFRO* would equal the total sales and *GHRO* the total expenses; while, at a price of 8 cents, the same facts would be illustrated by rectangles *ABNO* and *CVNO* respectively. But the monopoly is not so much interested in gross sales or gross expenses as in total net profits. Evidently, the profit per unit is represented by the vertical distance between the supply and demand curves. But total profit depends not only upon the gain per unit but also upon the number of units which may be sold. The products of these quantities, at 8, 6, and $4\frac{1}{2}$ cents respectively, are shown by the rectangles *ABCV*, *EFGH*, and *JKLM*. It is to the interest of the monopoly to make this rectangle of profits just as large as possible.

If the monopolist fixes the price at $4\frac{1}{2}$ cents, he can sell

4,200,000 units and the profits are represented by rectangle *JKLM*. If, however, he raises the price to 6 cents, though he can dispose of only 2,500,000 units, his net gain, as shown



by rectangle *EFGH*, is materially increased. Thus encouraged, the monopolist might try placing the price still higher at 8 cents, but, in this case, he will have overreached himself; for at this price society will take only 1,200,000 units, and the net profit rectangle *ABCV* is therefore much

smaller than *EFGH*, which represents the net gain at a price of 6 cents. Evidently, then, the monopolist will, in this state of demand and supply, attempt to keep the price in the neighborhood of 6 cents per unit.

The student will find it an interesting and valuable exercise to draw similar graphs of monopoly price determination for commodities produced (*a*) under conditions of constant expense and (*b*) under conditions of increasing expense.

The Effect of a Tax. — Our numerical illustration and our diagram may both be made to convey a lesson regarding the influence of taxation upon monopolies and monopoly price. Fixed expenses have no influence in determining the price. If, therefore, a fixed tax, say of $5000 a year, were to be laid upon this monopoly, it would not result in an increase of price. A study of the table will show that, with such a tax, the net revenue at price .08 would be $5000; at price .07, $17,000; at price .06, $20,000; at price .05, $15,000; at price .04, −$5000. The reason for this is that a fixed tax would become for the monopoly a part of its fixed expenses. Thus the price .06 will still be the point of maximum net revenue and hence the monopoly price. On the other hand, a variable tax, for instance a tax of one cent per unit, would result in this case in raising the monopoly price. In our illustration, such a tax would make the net revenue at the price .08, − $2000; at the price .07, $4000; at the price .06, nothing; at the price .05, − $15,000. Thus, though the monopoly would find its profits greatly curtailed by such a tax, consumers would be compelled to pay one cent more per unit for the monopoly product. The possible advantage which society might draw from the tax would therefore be wholly or in part offset by the increased price which the public would have to pay for the commodity. Such a raising of the price will not take place, however, if

the demand at the higher price is not sufficient to make as great a net revenue as at the lower price. We may conclude, therefore, that *fixed taxes, or taxes on the net revenue of a monopoly, cannot be shifted wholly or in part by a change in price; while taxes laid in proportion to the amount of business, since they contribute an addition to the variable expenses, may be wholly or in part shifted by a change in price.*

If the diagram be again used for illustration, it may easily be seen that any fixed tax must be subtracted from the rectangle representing net profits. It is evidently to the advantage of the monopolist to deduct such a tax from the largest rather than from one of the smaller rectangles. On the other hand, a tax of one cent per unit of output would raise the line representing the expense of production per unit by a like amount throughout its whole length. This would entirely change the shape and area of the various profit rectangles and in the case here considered would make the maximum net profit rectangle appear at the price .07.

The Second Law of Monopoly Price. — It is sometimes said that the price of a monopolized good depends solely upon the will of the monopolist. In the strict sense of the phrase this is not true. As our explanation has shown, the monopolist is *forced by economic motives* to establish such a price as will give the maximum net revenue. There are certain conditions on the side of demand which therefore have a decisive influence in determining monopoly price. We may group the most important of these in a general statement which may properly be called a *law of monopoly price from the point of view of demand. The greater the intensity of customary use of the monopolized commodity or service, the higher the general average of economic well-being, and the more readily wealth is generally expended, the higher will be the monopoly price which will yield the largest net returns.* Thus

monopoly, without any effort of its own, shares in the increasing wealth of a country, and absorbs a considerable part of it. It is, for example, among other influences, the larger wealth and the greater willingness to spend freely that make monopoly more profitable in the United States than in Germany or other European countries. The search for other illustrations of the law should prove an interesting and valuable exercise for the student.

In our discussion of monopoly price up to this point certain assumptions have been tacitly made, which it is well now to state and briefly discuss. We have been assuming that the monopolist, in forming his price policy, is actuated solely by desire to get the greatest money return; that he is willing to disregard unfavorable public opinion except in so far as such public opinion would influence demand for his commodity; that he knows definitely the expense, per unit and aggregate, for his different possible offerings to the market, and with equal definiteness what the public will pay per unit for different possible offerings. It is of course in the highest degree improbable that any one of these assumptions is completely true for any monopolist. Regard for the good opinion of his fellows may possibly lead a monopolist to get less money from them than his monopoly power makes possible. On the other hand, he may brave public opinion in making his money in the expectation that he can win back the approval of the public by a lavish and spectacular philanthropic expenditure of his monopoly gains. Public opinion may find expression in legislation that will limit his monopoly power. Again, such knowledge of the state of demand as has been assumed is perhaps never present in real life, though some monopolists seem to have an almost uncanny knowledge of this factor. In so far as our assumptions are unreal in the case of any monopolist, to

that extent will the actual monopoly price be below or above the one indicated by our analysis. How far the assumptions are unreal must be discovered in each case from careful study of the particular circumstances of that case.

Natural Monopolies of Class Two. — It was long ago said by a shrewd English engineer that where combination is possible, competition is impossible. Now combination is always possible in the case of natural monopolies of the second class. Indeed, combination in such businesses is inevitable. If two gas companies in a city, each with a capital of a million dollars, are able without combining to make 10 per cent profits, they will, when combined, make much more than 10 per cent. The force drawing them together works as constantly, if not as uniformly, as the attraction of gravitation.

The testimony of experience on this point is ample. There is never any sustained competition in this field. There is sometimes "war" to settle the terms of combination, and popular language, when it uses the word "war" in this connection, as in speaking of gas wars, etc., is scientifically correct. And yet, even to-day, after nearly a century of conclusive experiment, it frequently happens that a city is led by lavish advertising to believe that a new and "independent" telephone company, for example, will permanently lower charges and will remain independent. What, then, should be the policy of the government in dealing with these industries? Ought we in the United States to substitute government ownership and management of such monopolies for private ownership and management? Some of these monopolies have been in public hands so long that we no longer think of them as a possible field for private enterprise. Such, for instance, are the roads and streets, the post office, and, in many places, the canals. As to the

others, it would at least be well to limit the charters and to make such a reservation of public rights, including the right of future purchase on fair terms, as will later permit the government easily and readily to make such changes as accumulating experience may show to be wise. In an earlier chapter on the Industrial Stage in the United States, we have already given some consideration to the history of public policy in relation to these monopolies, postponing to the present point the argument usually offered in favor of the policy of public ownership.

Advantages claimed for Public Ownership. — The principal advantages claimed for public ownership of such monopolies are as follows: —

1. *Increase and Diffusion of Public Prosperity.* — A general diffusion among the community of the great incomes now reaped by the private monopolies will tend to prevent an undue concentration of wealth while at the same time promoting general prosperity. Most of the enormous fortunes of our country have sprung directly from natural monopolies in private hands. It should be noted that if such private monopolies are taken over by the government, the income from them may be diffused in either of two ways. Charges may be placed so low that the price will simply cover cost without allowing for profits, — the method pursued by our post office, and by the English telegraph service; or a profit may be derived from the industries, and this profit may then be used to lower taxes or to benefit the people in other ways.

2. *Economy and Efficiency.* — How enormous is the waste in attempted competition in the field of natural monopolies may be seen on every side. Indeed, it was some years ago estimated, possibly with some exaggeration, that, in railway construction and operation in the United States during the preceding half century, economic resources had

been wasted which, had they been economically applied, would have been sufficient to build comfortable homes for all the men, women, and children then in the country. There is a large basis of reason in the claim of those who maintain that public ownership of such monopolies would be more economical than the policy of private ownership and management has been.

When services of a monopolistic nature are performed by the public, great economies can often be secured by combining various services, such as water, gas, and electric lighting. Moreover, a better management is likely to result. It is only a popular superstition, now apparently passing away, that private enterprise is always and everywhere superior to public enterprise. The fact of the matter is that each should be superior in its own natural field.

Nor is it true that private enterprise always excels public enterprise in the matter of initiating improvements. The American post office blazed the path for American express companies in developing the money-order business. The English Postal Savings Bank set a pattern for private savings banks in the establishment of branches and in the use of stamps posted on small cards for savings. In recent years many great technical improvements have come from the managers of public monopolies.

3. *Purification of Politics.* — Private monopolies must be controlled by public authority; but control means interference with private business, and interference begets corruption. Scarcely a year passes that the country is not shocked by the disclosure of bribery and corruption in connection with the granting or extension of franchises, or in some one of the many ways by which monopoly in private hands seeks to secure privileges, to free itself from duties, or to escape from deserved punishment. A lawyer prominently

identified with monopolistic concerns has declared in a public address that the "ante-natal tax" which such companies are obliged to pay, — that is, the bribery necessary for securing franchises, — constitutes a regular element in the expenses of their business. This is one reason why our city governments are expensive. With public ownership and management of such monopolies, public interests and private interests are identified, and the best citizens can offer undivided allegiance to the cause of good government.

In the decade 1900–1910 the American people came to know, as never before, the extent and variety of corruption practiced by private owners of great natural monopolies. Thanks to the so-called "muck-rakers," scandal followed scandal in claiming the outraged interest of the public. A point was reached where the old story of Diogenes and his lantern could provoke only a rueful smile. The result has been a great deal of legislation, — briefly discussed in an earlier chapter, — designed to secure adequate regulation of private monopoly by public commissions and otherwise.

4. *Will Overthrow Injurious Social Monopolies.* — There seems to be general agreement that the social monopolies which rest on patents and copyrights are advantageous to the public. Trade-mark monopoly, public consumption monopoly, and fiscal monopoly, on the other hand, are forms of social monopoly that are not so generally accepted without question. Finally *special privilege monopolies of class one* are losing in public support, while *special privilege monopolies of class two* are now everywhere admitted to be distinctly injurious to the best interests of society. Some of these injurious social monopolies have been made possible by special favors received from the natural monopolies now under consideration; as, for example, by receiving lower freight rates than competitors could secure. If all citizens

could be assured just and equal treatment at the hands of natural monopolies, the limits of competition would be extended, while the limits of monopoly would be restricted. But it is problematical whether such just and equal treatment can be hoped for while natural monopolies are in private hands.

Jevons's Criteria. — The English economist Jevons, as a result of careful study of government management of monopolies, reached the conclusion, in his "Methods of Social Reform," that there are certain general principles or characteristics by which we may judge what monopolies the state may most safely undertake to manage. These characteristics may be briefly summarized as follows: — The business (1) should need a single, all-extensive system for efficient operation; (2) should be of a routine nature, as, for example, is the business of the post office; (3) should be of such a nature as to be subject to constant public scrutiny and criticism; and (4) should require a relatively small amount of capital expenditure in proportion to the amount of business done.

As regards these criteria, it may be observed in the first place that they afford information only as to what businesses the state is *most likely* to conduct with success, — such success or failure, moreover, being here regarded solely from the point of view of the private business manager. In other words, there is no place in this statement of principles for the consideration that the state may promote the social welfare by managing business at what, in the language of the private entrepreneur, would be called a loss. Our public highways are almost everywhere state-managed monopolies, created and maintained by taxation, not by fees or tolls. Judged solely by the standard of private management, therefore, they do not constitute a successful business. Yet

no one to-day would advocate a change in public policy which alone could make their management "successful."

In the second place, it may be observed that although we may be unwilling permanently to restrict the state's activity within the "ring fence" thus set up, yet we may well use Jevons's criteria as an aid in determining the order in which the state should assume the management of natural monopolies. Furthermore, it will appear on reflection that differences in the degree to which various natural monopolies now conform to these criteria are not permanent, but are ever changing. Thus the railway business is becoming more and more susceptible to routine management; the need for its service becomes every day more widespread; it falls more and more under the intelligent criticism of the public. We may, therefore, question whether, judged even from the point of view of private business, all natural monopolies may not in time be successfully managed by the state.

Conclusion. — The advantages that might result from public ownership of natural monopolies of class two have been explained. While recognizing these, we must not overlook the enormous difficulties in the way of government ownership and control, — the serious problems of governmental organization involved, the problem of improving the civil service until men of superior capacity find permanent and attractive careers in the service of governments; of securing greater honesty and efficiency in the public business. In the case of government railways would arise the problem of rates and of the conflicting demands of different sections and industrial interests. In European countries these difficulties have proved very grave, and are still far from final solution, as indeed is the case in our own country with private ownership and management.

The most hopeful advocate of public ownership of such monopolies would probably admit that it will be a long time before all natural monopolies pass out of private hands. Meanwhile, there will remain the ever perplexing question of regulating the granting, extension, and renewal of franchises, and of the public control over such undertakings. It would take us too far afield even to mention all the difficult and perplexing questions arising from the attempt to control these natural monopolies. Especially within the past few years have the legislatures and courts of state and nation been confronted by these perplexities, which seem to grow more baffling with every year. To take but the single instance of price or rate control, it is clear that state and federal commissions, legislatures, and courts are facing a problem of the utmost difficulty, if, indeed, the problem is not absolutely insoluble. Shall state or federal commissions exercise final authority in fixing or limiting rates charged on traffic within the bounds of the single state? How shall such rates be fixed or limited, — on the basis of "cost of service," value of commodities carried, or on the principle of charging "what the traffic will bear"? Assuming any one of these bases, shall the railways be permitted to charge rates that will always return a profit, even in times of war or industrial depression? What is a reasonable profit to allow the roads? Is an increase in the value of their roadbeds, due to increasing population, to be counted as part of their "investment," with the result of raising rates to shippers and final consumers? If the public determines rates, must it also interfere in the matter of wages of employees, on which rates must in part rest? If the public is driven to interfere in regulating wages and conditions of employment of railway employees, shall the men continue to have the right to strike? Such questions as these could be multiplied to

fill many pages of this text. New ones are rising year by year. Indeed, no sooner does one of them seem about to be answered, than it in turn raises another. These questions were never more urgent than they are now in our present troubled times.

SUMMARY

1. The essential idea in monopoly is unity of action, leading to control of price and other conditions.
2. Monopoly value differs from competitive value in that the supply of monopoly goods is not determined by cost of production.
3. Monopoly price is the price of maximum net revenue. In establishing the supply and the price, the monopolist disregards fixed expenses; hence a fixed tax on monopoly cannot be shifted.
4. Monopoly price is controlled on the side of demand by the wealth and purchasing habits of consumers.
5. It is claimed in favor of public ownership of natural monopolies that the policy diffuses prosperity, is economical, purifies politics, and overthrows injurious social monopolies.
6. Jevons's criteria of public ownership are: need of a single, all-extensive system for efficient operation; routine nature of business; openness to public inspection; small fixed capital expenditure.

QUESTIONS FOR RECITATION

1. Define monopoly. Name and define the different classes of monopoly. Mention some monopolies of which you have knowledge, and explain what monopoly advantages they enjoy.
2. Sum up in a brief statement the peculiar characteristics of natural monopolies of the second class. Mention some monopolies of this class.
3. Show by a numerical illustration and by diagram how monopoly price is determined. Explain the difference between monopoly price and competitive price.
4. Explain differences in the effect of different methods of taxation of monopolies.
5. What advantages are claimed for public ownership of natural monopolies? What difficulties are involved in such a policy?
6. State the law of monopoly price from the side of supply; from the side of demand.

QUESTIONS FOR STUDY AND DISCUSSION

1. How far has the price policy of the Standard Oil Company been influenced by public opinion? by law? How near to the pure monopoly price has the company usually come?
2. Is it better for the American people to pay lower prices for their goods, or to pay monopoly prices, assuming that part of the monopoly profits will be devoted to establishing educational institutions, pensions for college teachers, bureaus for sanitary research, and the like, at the will and pleasure of the monopolist?
3. What result would you predict, when a city taxes a street railway monopoly a fixed annual amount on each car operated?
4. Is political corruption in city and state and nation, — so far as such exists, — an argument for or against public ownership of natural monopolies?
5. "Private monopoly is always indefensible." Would you qualify this statement?
6. Explain what is meant by the statement that the monopolist charges the highest possible price. Qualify the statement.

LITERATURE

Bemis, E. W.: *Municipal Monopolies*, pp. 660–680.
Brown, W. J.: *The Prevention and Control of Monopolies.*
Ely, R. T.: *Monopolies and Trusts*, Ch. III, pp. 102–104, also Ch. VI, pp. 229–231.
Hobson, J. A.: *Evolution of Modern Capitalism*, pp. 156–160.
Jenks, J. W.: *The Trust Problem*, pp. 24, 43, 53, 98.
Jevons, Wm. Stanley: *Methods of Social Reform*, pp. 279–280.
Report of the United States Industrial Commission, Vols. I and II.

CHAPTER IV

MONEY

Having discussed at length the fundamental principles on which exchange and value rest, we pass naturally to consider the nature of the complex mechanism by which exchange is effected. At the very center of this mechanism stands money, the medium of exchange. We have already in our historical study explained how from the custom of making gifts men passed to regular exchange by barter, how from barter everywhere grew up the regular use of some one thing or some few things as means of making exchanges. With the handicraft stage men had come to use the precious metals for this purpose, and money, in the modern sense of the word, thus became a regular institution.

The Definition of Money. — But what is money? When we come to define the word, we find that usage is by no means uniform. It is often convenient to use the *popular* and more general meaning of the term, according to which money is *anything that passes freely from hand to hand, as a medium of exchange, and is generally received in final discharge of debts.* But there is a narrower conception based upon the functions which money fulfills in the modern economy. In the first place, (1) we find that money everywhere serves as a *medium of exchange.* This, the first function to be developed, is everywhere the principal function of all kinds of money. Our present civilization would be impossible without money as a medium of exchange. Without such a medium, a man

with a horse who wanted a coat would be obliged to hunt for a tailor who wanted a horse, and even after finding him, he might be unable to effect an exchange, owing to the inequality in value of the things to be exchanged. In the second place, (2) we find that money serves directly and immediately as a *denominator or namer of values*. In other words, money is the "*common language of value.*" The phrase "measure of values" is used by many economists to characterize this function, because they hold that the money commodity must have value in itself, and that the value of other commodities is found by comparing their value with the value of the money commodity.

This second function springs naturally from the first, for as men make exchanges commonly for some commodity, they naturally form the habit of naming the values of all exchangeable things with that commodity as one term of the value ratio. That this function may be best fulfilled there is usually provided a definite, concrete money unit like our gold dollar, which consists of 25.8 grains of gold nine-tenths fine. One-tenth of the weight of gold coins consists of an alloy of baser metals which is formed principally of copper. The weight of pure gold is therefore 23.22 grains. When, having such a unit, we say that a commodity is worth $10, we mean that the exchange value of the commodity is ten times that of the monetary unit. It sometimes happens that men name values, not in terms of the money actually used, but in terms of some money which has been in earlier days the regular medium of exchange. Thus, throughout our Eastern States one often hears values reckoned in shillings, though it is long since there was any money of that denomination coined. Such money is called "*money of account.*"

In the third place, (3) money serves the function of a *standard of deferred payments*. If I wish to sell commodities

or services to-day to one who can pay me only at some future time, it is of the utmost importance that we should have some agreed standard according to which the payment should be made. This function of money is usually facilitated by having a *legal tender quality* attached to it, though such a legal tender quality is by no means necessary to the fulfilling of the function. *By the use of the term "legal tender" we mean simply that the legislature has declared that anyone having a debt to pay may discharge his debt through the "tender" or offer of the prescribed commodity, and that in case of a suit at law the courts will declare such a tender to have been a legal one.* It is clear that the third function is only an extension of the second. Some authors attribute to money a fourth function, that of serving as a *store or receptacle of value*, so that the value may be transferred from place to place and from time to time. Thus Roman gold money, preserved for two thousand years, has brought its value down to our own time; and gold money taken across the Atlantic bears with it its stored-up value.

And now we may sum up what has gone before in a formal definition of money in the stricter sense of the word. *Money is any commodity that serves as a medium of exchange, as a denominator or namer of values, and as a standard of deferred payments.* And the economists who regard the fourth function of money as essential would complete the definition by adding the words "*and as a store of value.*" The meaning given to the word money in the following pages, whether popular or scientific, will in each case be evident from the context.

Qualities Desirable in the Material of our Money. — Many things have been used as money at one time or another in the world's history: cattle nearly everywhere; furs, especially in the Northern countries; oil; wampum, among the early New Englanders and New Yorkers; tea, at Rus-

sian fairs; tobacco, in the early days of Maryland and Virginia; many baser metals; and the two precious metals, gold and silver. Of all the metals, gold and silver have in civilized nations been found best adapted to money uses. Of the two, gold has shown a special fitness, and now bids fair to survive as the money metal of the future. Nevertheless, silver is still everywhere used in large quantities, though among advanced nations it generally occupies a subordinate position. The qualities which have given gold and silver their predominance for use as money are precisely those qualities which we may readily recognize as the qualities that all money should have. In the first place, they are very *generally desired, independently of their money use,* since they can be used in the arts as well as for ornament. This fact gives them *security* and *stability* of value. Whenever their value begins to fall, their use for other purposes than that of money increases and so prevents the fall in value from being as great as it otherwise would be. Moreover, this stability of value is further secured by the fact that the annual production of these metals bears so small a proportion to the entire amount in existence. Gold and silver are almost imperishable. The Director of the United States mint estimates that 31,626 tons of gold and 480,843 tons of silver had been produced in the world down to the end of 1914. He estimates that about 918 tons of gold and about 8796 tons of silver were produced in 1914. Bearing in mind the durability of both metals and the guarantee of careful preservation assured to both by their high specific value, it will be seen that even the present unprecedentedly large annual production represents but a small part of the world's total surviving stock. And yet, as will be explained later, the great increase of production during recent years has exercised a marked influence on all the problems connected with money.

The *high specific value* of the precious metals — that is, their high value in proportion to their weight and bulk — adapts them for use as money by making them a convenient store or receptacle of value. Because of their high specific value, the cost of transporting them from place to place is slight, and therefore their value varies little from place to place. In other words, they have a high degree of *portability*. Their *durability* and *indestructibility* are also important qualities, while their extreme *divisibility* without loss of value makes it possible to secure a medium of exchange of any desired value, however small. Their *malleability* renders coinage easy, as does also their *homogeneity*, by virtue of which one ounce or pound is always just as valuable as any other ounce or pound. Moreover, the metals and the coins made from them are readily *recognizable* on account of their peculiar ring and their other attributes, and are therefore well adapted to popular use.

Let us now sum up these qualities which are found especially desirable in the money material: they are (1) *commodity value*, (2) *high specific value*, (3) *stability of value*, (4) *uniformity of value*, (5) *cognizability*, (6) *durability*, (7) *portability*, (8) *malleability*, (9) *homogeneity*.

Coinage. — When the metals first came to be used as a medium of exchange, they passed from hand to hand in their rough state, as "dust" or in nuggets, and the testing of the amount and fineness was left to the parties to the exchange. In course of time, private individuals of note occasionally stamped or otherwise certified to the weight or fineness or both, a custom which still obtains in some parts of the world. Gradually, governments took over the work of providing an authorized currency, and systems of regular coinage were developed. In attempting to improve coins, governments have sought first of all to prevent counterfeiting by making the

coins of regular and uniform sizes, and by various devices, such as elaborate designs upon the face, milled edges, etc. In all this, governments, though they do not give the original value to the money, do increase the value, by the superior exchangeability which their certification confers upon it.

When the government at its mint coins for private persons any metal they may bring to it, the coinage is said to be *on private account* or *free coinage*. *The expression "free coinage," therefore, does not have reference to the cost of coining.* If the government coins for private persons *without charge*, coinage is not only free but also *gratuitous*. Any charge by the mint for coinage is called *mintage*. When the charge is just sufficient to reimburse the government for the expense of the work, it is called by the French name *brassage;* anything in excess of such a charge is then called *seigniorage*. When the government buys the metal in the market at the market price and coins it, the coinage is said to be *on government account*. If the face value of the money thus coined exceeds the market value of the metal by more than the expense of coinage, the difference constitutes another form of seigniorage. All the great industrial nations to-day coin gold on private account and silver on public or government account; in other words, they have free coinage of gold, but not of silver. In England and the United States the coinage of gold is also gratuitous: though in England if one wants the coin immediately, one must pay the Bank of England $1\frac{1}{2}d.$ per ounce.

Governments and Money. — From the fact that governments *regulate* the coinage of money, coupled with the fact that they often make it a legal tender, there has grown up in the minds of many people the erroneous idea that governments *make* money. As we have seen, all the functions that make money what it is can be fulfilled and have been fulfilled without the participation of government at all. Govern-

ments, therefore, do not make money. But by careful coinage to prevent counterfeiting, by stringent laws against counterfeiting, and by conferring a legal tender power upon the medium of exchange, governments have done much and can do much to increase the currency or exchangeability of money, and hence may give to a certain weight of money material an increased value. Gold and silver would have a considerable value to-day for use in the arts and for ornament, even if they were not used as money at all. They would have a very high value as commodities and as money, even if the government should leave the work of coinage and the work of debt enforcement to private honor. But it cannot be doubted that gold and silver to-day have a higher value than they would have in either of the two cases just assumed.

Prices and the Value of Money. — It is clear from what has been said concerning money as a namer of value, that a change in the value of the money unit means a change in the general prices of other commodities. To say that prices have risen is the same as saying that a dollar has become cheaper; *i.e.* it takes more dollars to buy the same commodity. Again, any cause that lowers prices thereby raises the value of money. Prices and the value of money vary inversely.

Prices and the Quantity of Money. — But is there any relation between the *quantity* of money and prices; in other words, between the *quantity* of money and the *value* of the money unit? When prices are high, it is evident that a larger volume of the medium of exchange is needed, the rapidity of circulation remaining the same, than when prices are low. If coats are $20 apiece, it takes a greater quantity of the medium of exchange to buy them than when they are only $10 apiece. This is a fact about which there is no dispute. But it is a distinct and difficult question whether an increased quantity of the medium of exchange can itself make prices

high, or whether it is the high prices that call forth the increased quantity of medium.

The Quantity Theory. — To compare and discuss the different theories of the causes that determine the value of money is beyond the scope of an elementary treatise, and we can confine ourselves, therefore, to the quantity theory, which in one form or another is the theory most widely accepted in the United States. It is not easy to state the quantity theory briefly, and at the same time accurately, but in a general way it runs as follows: *Other things being equal, the value of money varies inversely, and general prices vary directly with the quantity of money.* Stated in another way, with a view to include some of the "other things" that in the above statement are assumed to be "equal," we might phrase the theory as follows: *Other things being equal, the value of money and the general price level will be determined by the balance of demand and supply of money.* By demand for money is meant the total amount of money work to be done, *i.e.* the number of exchanges to be effected. With trade brisk, a great volume of commodities is produced and exchanged, and there is a strong demand for money. Hence unless the money is increased in amount, or the rapidity of its circulation is increased, or unless something else takes part of its work of exchanging, each piece of money will have to do more exchanging, and it can do this only by exchanging each time for more goods, *i.e.* at lower prices. By supply of money is meant its quantity taken in connection with the rapidity of its circulation. Now, according to the theory, if the general state of business is thought of as unchanging, while the supply of money increases in either of its factors, as just given, there will be less money work for any piece of money to do, *other things being equal;* any piece of money will have a lower ratio of exchange than be-

fore, — which is the same as saying that prices will be higher. To go a step farther, we may say that, — *other things being equal,* — if demand for the medium of exchange increases faster than its supply, the general price level will fall, and *vice versa.*

In the foregoing statements of the quantity theory, we have used the phrase "other things being equal." By far the most important among the "other things" is the use of credit to replace or supplement money in the work of exchanging. This use is already widespread throughout the world and is rapidly increasing. Credit in exchange is used chiefly in two ways: first, in the form of credit money such as government and bank notes; and, second, by the transfer of bank deposits that results from the use of checks. The phrase *deposit currency* is coming to be used to describe this last element in the general medium of exchange. And just as money may have more or less rapid circulation or "turn over," so bank deposits may be used more or less briskly in the work of making exchanges by checks.

To expand the quantity theory further, therefore, we may say that *changes in the general price level depend upon relative changes in the volume of trade, as compared with changes in the volume and rapidity of circulation of the currency with which the trade is carried on, this currency consisting wholly or chiefly of money and deposit currency.*

The Value of Money and the Cost of Production. — The theory holds also that in the long run, the value of money *is influenced by* the cost of production of the precious metals. Dear money and cheap goods, it is said, will make mining cheaper and more profitable, and hence will tend to increase the output of the precious metals. Conversely, cheap money and dear goods will lessen the incentive to mining, and hence

will tend to lessen the supply of money metal or diminish its rate of increase.

The extent of the practical influence of cost of production upon the quantity of money and hence upon prices will depend upon many factors, such as the greater or less degree of chance in mining. It is generally agreed that under present conditions the practical influence of cost is relatively slight.

General Prices and Prices of Individual Commodities. — It is to be particularly noticed that we have spoken of changes in *general prices*, or of changes in the "price level." There is nothing in the theory that would be inconsistent with an increased value of money coinciding with a rise in the value of some other commodity or group of commodities. It is always happening that while general prices are rising or falling, the prices of some commodities are moving in the opposite direction. Even though the quantity of money were very greatly and very rapidly decreased, the difficulties of producing some other commodity might increase more than in proportion, with the result that the *value* of that commodity, measured in terms of money, would rise instead of fall.

Paper Money. — Our discussion of money material and the qualities desirable in that material had reference of course to our primary metal money. Another form of money which is used extensively in modern days is paper money, which usually consists of written promises to pay on demand, given by banks or by the government. People take these promises to pay and use them as money, because they believe that the promise will be kept; or because they think that others will accept them without question; or because they know that the notes, having been made legal tender, must be accepted for debt unless otherwise expressly stipulated by contract;

or because, as is the case with most kinds of paper money, such bills or notes are receivable for taxes. Where confidence in paper money is complete, such money is often preferred to metal money, because more convenient.

If the student will read carefully what is engraved on the different kinds of paper money circulating in the United States, he will readily learn its nature, and will discover that it is of two general kinds : notes of national banks and of Federal reserve banks, and notes and certificates of the Federal Government. The paper money issued by the government is of several different kinds. Gold certificates and silver certificates are simply pieces of paper entitling the holder to demand and receive from the treasury the number of dollars printed on the face of the certificates, in gold and silver respectively. On the other hand, the so-called "greenbacks," or United States Notes, — about $347,000,000, — which grew out of the exigency of the Civil War, and the so-called Sherman Notes, or Treasury Notes of 1890, now very rare, are simply government promises to pay on demand the amounts named on the face of the notes. These are not backed up dollar for dollar by hard money in the Treasury, but are protected by a reserve fund which is supposed to be sufficient to meet all demands as they are made. National bank notes and the notes of the new Federal Reserve Banking system will be explained in the next chapter.

Dangers of Irredeemable Government Notes. — It is easy to set printing presses to work, and to issue money in unlimited amounts. This is apparently much easier than taxation as a means of paying the expenses of government, and the temptation to pursue such a policy has often promoted waste and extravagant expenditure. In order to keep the new paper in circulation it is always necessary to make it legal tender. Confidence in the ability and willingness of

government ultimately to redeem the paper is likely to decrease. The new paper currency therefore usually depreciates until it is worth less per unit than the old metallic currency. Since debtors always prefer to pay their debts in the cheapest legal tender money available, the paper currency alone will be used in business transactions, and the metallic currency will disappear from circulation, going to other countries in payment for imports or being melted down for use in the arts. This is in accord with the well-known law laid down by Thomas Gresham, Queen Elizabeth's finance minister, which says that *when two kinds of money of the same nominal value per unit are both legal tender, the cheaper unit always drives the dearer out of circulation.* Since the depreciated money makes prices high, all kinds of fixed incomes such as salaries, interest due on debts, etc., will evidently have less purchasing power or buy less goods than has formerly been the case. This is a great inconvenience in international trade, because one nation does not recognize the legal tender quality of another nation's paper money, and foreigners lose faith in a paper money which is not kept at par with the metal money. Governments can keep their paper money at par by redeeming it in gold whenever gold is demanded. In such cases paper money is said to be redeemable.

Bimetallism

It is probably impossible to give to young people born since 1896 an adequate idea of the bitterness of the political controversy of that year over the question of *bimetallism.* In many respects it resembled war, and it led to frequent and confident prediction of civil war. Especially difficult must it be for the young man of to-day to realize that less than a generation ago a national election depended upon the fact

that for the twenty years then ending prices had been falling!

If the student of to-day can summon sufficient interest to the task, we shall consider briefly "what it was all about."

To constitute a system of bimetallism, three things are necessary: *two metals, free coinage of both at a fixed ratio, and the giving of full legal tender quality to both.* Down to the nineteenth century, silver was still the usual money of trade and reckoning, though gold was also used. Governments had generally in the latter part of the period coined freely the two metals at a fixed ratio of weight. A frequent ratio was $15\frac{1}{2}$ to 1, which means simply that the governments had put $15\frac{1}{2}$ times as many grains of silver into the silver coins of any denomination as into the corresponding gold coins. At the beginning of our separate existence as a nation, we in the United States chose the ratio of 15 to 1, changed it in 1834 to 16.002 to 1, and again in 1837 to 15.988 to 1. This ratio in popular speech was known as "16 to 1."

The Latin Monetary Union. — The European ratio was maintained within narrow limits with free coinage of both metals for about seventy years during the nineteenth century by the action, first of France, and then of a combination of countries, called the Latin Monetary Union, in which France, Belgium, Switzerland, and Italy were most prominent. Under their system, everyone who had gold or silver in any form could have it changed to money at the established ratio of coinage.

Limitation of the Coinage of Silver. — About 1873, however, Germany decided to change from silver to gold monometallism, and threw upon the markets of the world an immense amount of silver at the same time that she increased the demand for gold. In the same year, our own country dropped the silver dollar from the list of coins to be struck at

the mint, thus putting us on the basis of gold monometallism, although, as a matter of fact, no silver dollars had been coined for years. The value of silver rapidly declined and the Latin Union soon after suspended its free coinage. To add to the confusion, large discoveries of silver at about the same time brought about a great and rapid increase of the supply. The result of these changes was a violent departure from the old market ratio between the two metals, silver falling so much in value in terms of gold that within recent years according to the state of the market it has required from about twenty-six to thirty-nine ounces of silver to purchase one of gold.

Results of Monetary Changes. — These changes naturally resulted in lower prices, and thus virtually increased all debts, and produced great distress. But the increase in the debts was only a part of the mischief. South America and the Oriental countries being on a silver basis, trade had easily been carried on with them as long as gold and silver readily exchanged approximately at an established ratio; but when the ratio began to fluctuate widely, an uncertain and disturbing element was introduced into such trade, rendering it highly speculative, and therefore on the whole less profitable to the world. The merchant in Liverpool who sold goods to a merchant in India would agree to receive in exchange a fixed sum of silver money; but, as it was necessary for the English merchant to exchange this silver for gold, a fall in the value of silver during the progress of the transaction might bankrupt him. Under these conditions exportation of manufactured goods to the Orient was impeded.

These, in brief, are some of the difficulties that are believed by many to have resulted in great measure from the general limitation of the coinage of silver. Bimetallism was proposed as a remedy. Under bimetallism government

would coin at a fixed ratio all gold and silver that anybody desired to have coined; in other words, government would coin both gold and silver on private account. Bimetallic coinage by one country alone is called *national bimetallism*. It is the general view of economists that no country is commercially powerful enough to furnish such a demand for both metals as would be necessary to maintain parity of value at any coinage ratio yet proposed.

With *international bimetallism*, however, which means bimetallism based on an agreement like that of the Latin Monetary Union before 1874, the case is different. Economists were at one time inclined to favor such a monetary policy, and even to-day there are in Europe and America some economists who believe that such international action would be feasible. They believe that if, for instance, England, the United States, Germany, and France should enter into such an agreement, those countries could maintain the ratio. International bimetallists remind us that gold and silver are used principally for money, and that owners of gold and silver would be obliged by the international agreement either to have the metal coined at the government ratio, or to sell it in the market for use in the arts. But the arts absorb only a relatively small portion of the annual product, and a very much smaller portion of the total existing supply. It is therefore maintained that governments are in the position of monopolists, and by agreement could maintain a fixed coinage ratio.

Recent Monetary History

International Monetary Conferences. — The strong desire for international bimetallism, felt both by economic theorists of repute and by practical statesmen in many lands, led to

repeated monetary conferences. The most noteworthy of these were the Paris Conference of 1878 and the Brussels Conference of 1892. But these conferences did not result in the restoration of bimetallism. England, as a great creditor nation, led the opposition to all plans for international action.

Silver Purchase Acts of 1878 and 1890. — No great state coins both metals freely. In the United States the Bland-Allison Act of 1878, providing for the purchase and coinage of a limited amount of silver, was followed in 1890 by the Sherman Law, a compromise measure, which provided for an increase in the silver purchases.

Repeal of the Sherman Act. — For two or three years there were heavy exportations of gold from the United States, and as a result it was commonly claimed that if the Sherman Act were not soon repealed, gold exportations would continue until the United States would be driven to a silver basis. During this same critical period, the Indian mint was closed to free coinage of silver, and the price of the metal fell within three days from 82 cents to 67 cents an ounce. Added to this was the fact that the revenues of the United States fell off until they were less than current expenditures, thus creating a fiscal deficit. This combination of circumstances led to a special session of Congress in the late summer of 1893, which, after a bitter fight, repealed the purchasing clause of the Sherman Act.

The Currency Act of 1900. — Between 1893 and 1900 the monetary situation gradually improved, although for two or three years the United States, in order to protect the currency, was driven to repeated issues of bonds under very humiliating circumstances. The defeat of Mr. Bryan, the Democratic candidate for President in 1896, who ran on a platform declaring for "the free and unlimited coinage of

silver and gold at the ratio of 16 to 1, by the independent action of the United States," paved the way for a new currency act which was passed by Congress March 14, 1900. This act expressly declares that the gold dollar shall be the standard of value in the United States, and that all other kinds of money are to be maintained at a parity with gold. It further requires the United States Treasurer to maintain a special reserve fund for the redemption of United States notes. This fund must in all cases amount to $150,000,000 in gold or in gold and redeemed notes. If the amount of gold falls below $100,000,000 and the redeemed notes, which constitute the remainder of the fund, cannot at the time be exchanged for "free" gold in the general treasury, short time *gold* bonds may be issued and sold to make up the deficiency in the reserve. As to silver coinage, the act provided for the coinage of silver dollars from the already existing stock of silver, until the number of such dollars should equal the amount represented by the "Treasury notes of 1890," issued to pay for the silver. These silver dollars, or the corresponding silver certificates, were paid out in redemption of the "Sherman notes," as fast as such notes were presented at the Treasury. When practically all the Sherman notes had been redeemed, the remainder of the silver bullion purchased by the government — representing the seigniorage from the silver coinage — was coined into subsidiary silver.

It will be seen, therefore, that by the terms of this law, strong provision has been made for securing parity of all parts of our money, and for strengthening the position of the United States as a country of gold monometallism. Our monetary position has been further strengthened by the Federal Reserve Act, which will be explained in the following chapter.

SUMMARY

1. Money serves as a medium of exchange, as a namer of values, and as a standard of deferred payments.
2. The precious metals have certain desirable qualities that have given them first place for money use.
3. Governments do not create, but they do increase the value of money.
4. The quantity theorists hold that the value of money depends on the quantity; that, other things being equal, increasing the quantity of money decreases its value; and decreasing the quantity increases its value.
5. Bimetallism was long advocated as a policy to secure stability, but recent economic tendencies have destroyed practical interest in the subject.

QUESTIONS FOR RECITATION

1. Name the qualities desirable in money. Mention different things that have been used as money.
2. What is coinage? Free coinage? Gratuitous coinage? Brassage? Seigniorage?
3. What is the relation of government to money?
4. State the quantity theory of the value of money.
5. From an examination of actual paper money, name and describe the different kinds that are used in the United States.
6. What are the evils of irredeemable paper money?
7. What is bimetallism? International bimetallism? What was the Latin Monetary Union?

QUESTIONS FOR STUDY AND DISCUSSION

1. How much gold has been produced since 1900? What percentage does it represent of all the gold ever produced?
2. Is there any one in your town who can recall the first check ever used in the town?
3. Did greenbacks drive gold out of circulation in California during the Civil War? Why?
4. In what qualities is gold preferable to silver as a money metal?
5. What is the present market price of silver bullion? What is the relation between the bullion value and the money value of American silver?
6. What are subsidiary coins? token coins?

LITERATURE

Brown, H. G.: *International Trade and Exchange.*
Fisher, Irving: *The Purchasing Power of Money.*
Holdsworth, J. I.: *Money and Banking.*
Jevons, W. S.: *Money and the Mechanism of Exchange*, Ch. VIII (the four pages on Gresham's Law).
Johnson, J. F.: *Money and Currency.*
Kinley, David: *Money, A Study of the Theory of the Medium of Exchange*, especially Chapter V.
Laughlin, J. L.: *The Principles of Money.*
Scott, W. A.: *Money and Banking*, pp. 69–72.
Walker, F. A.: *Money*, Part I, Ch. I, pp. 1–10; also *Money, Trade and Industry*, and *International Bimetallism.*
White, Horace: *Money and Banking*, Part I, Ch. II, pp. 23–29.

CHAPTER V

CREDIT AND BANKING

What Credit Is. — We have seen the immense development in exchange that has been made possible by the use of money, — a development resulting in the division and organization of labor and a revolution of the whole economic life. Yet money alone as a medium of exchange is entirely inadequate to explain the magnitude of present commercial transactions. Great as is its advantage over barter, money is too clumsy an instrument for many modern purposes. While it is by no means dispensed with in our own day, money is primarily characteristic of the economic stage preceding our own. The characteristic instrument of exchange in our day is not money, but credit.

Like so many other terms borrowed by economics from the language of everyday life, the word " credit " has many meanings and shades of meaning. One of the commonest of these is indicated when we say that a man's credit is good or that he has good credit, by which we mean that he has the reputation of paying his debts and has the ability to do so, and that therefore other men are willing to sell him goods and to wait for their pay until a future date. Another important meaning of the word refers to the character, not of the man, but of the transaction itself. The transfer of goods with the expectation of future payment is a credit transaction. This is the idea which we embody in the

word "credit" in the science of economics. We may therefore define the term as follows: *A credit transaction is a transfer of goods for a promise of a future equivalent.* First, it should be noticed that the transaction is partly present and partly future, or, in other words, (1) credit contains an *element of time.* In the second place, it is to be remarked that (2) the transaction involves *confidence* either (*a*) in the *character and resources of the borrower* or (*b*) in the *sufficiency and security of goods* which he may have *pledged* for the fulfillment of his promise. A third factor frequently present is (3) a written *evidence of indebtedness,* given by the borrower to the lender. This writing constitutes the *instrument of credit.*

The Mechanism of Credit. — The mechanism of credit, or the machinery by which credit operations are carried on, consists of two parts: (I) the *instruments of credit,* — the evidences of indebtedness, — such as checks, drafts, notes, bonds, etc.; and (II) the *institutions of credit,* consisting principally of banks and clearing-houses.

I. *Instruments of Credit.* — Among the instruments of credit the simplest and most extensively used is the (1) check. *A check is an order upon a bank by an individual or company requiring the payment of a certain sum of money to the order of a person named or to the holder of the check.* In this form of credit the element of time plays a very small part. If money were paid instead of a check, the person receiving it would be likely to deposit it in a bank. Receiving a check, he carries it to the bank. The element of credit here prominent is the trust or confidence involved, the confidence that the check will be honored by the bank upon which it is drawn.

Bankers also use checks. *When one banker gives a check on another, the instrument is usually called a* (2) *draft,* and

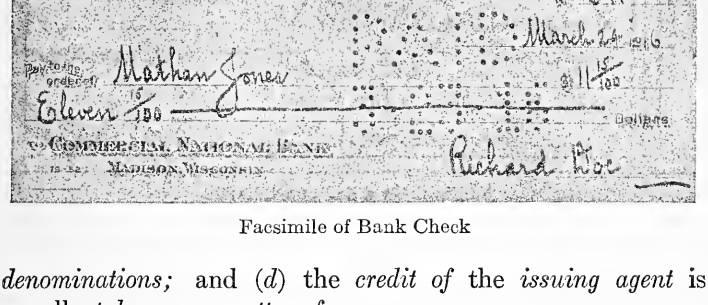
we shall so use the word in what follows. Another form of draft arises when *a company or an individual orders the payment of a sum of money to a bank.* This form we shall call a (3) *bill of exchange.* When the drawer and drawee of a draft or bill of exchange live in the same country, the instruments are called *domestic* or *inland;* otherwise they are called *foreign.* Both these terms — drafts and bills of exchange — are so loosely and variously used that the reader must usually judge a writer's meaning from the context.

A fourth form of instruments of credit consists of (4) *notes,* which are usually *promises to pay a certain sum of money for value received, under conditions named, on demand or at the expiration of a certain period.* Here the time element is important, as is indicated by the fact that interest is generally paid on such instruments. Such notes are of three general kinds, according to the character of the maker. (*a*) Individuals and companies issue *promissory notes* for payment on demand or within a certain time. (*b*) Banks in most countries issue notes which commonly pass as money and which have a different legal standing from that of the notes of individuals. Such are the national bank notes and federal reserve notes of the United States. (*c*) Governments themselves often issue notes such as those we have already discussed in treating of the subject of paper money. Bank notes and government notes very rarely bear interest.

The facsimiles on pages 247 and 248 will help the student to understand the nature of the instruments which have just been described.

Ordinary instruments of credit do not circulate freely like money, but are intended to be used primarily in one transaction; yet they are by no means confined to this. Thus checks, drafts, and bills of exchange often pass through many hands, and notes are often transferred once, twice, or

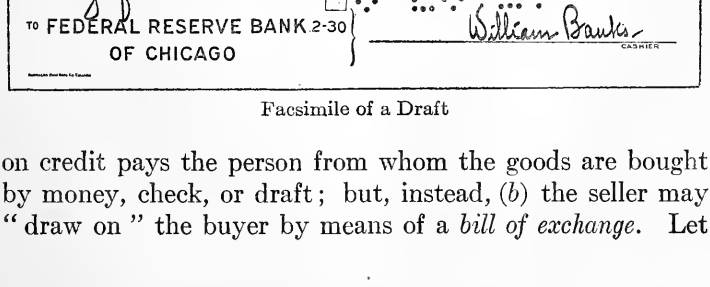
many times. With bank notes and government notes, however, which circulate as money, the case is quite different. These are (*a*) *intended for general use;* (*b*) they are *always drawn to bearer;* (*c*) they are *issued in fixed and convenient*



Facsimile of Bank Check

denominations; and (*d*) the *credit of* the *issuing agent* is usually *taken as a matter of course.*

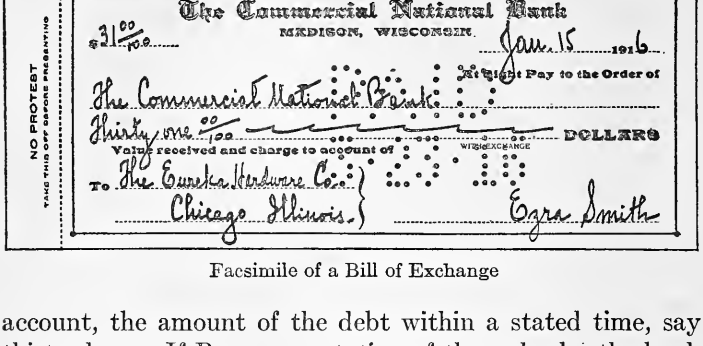
Credit transactions between individuals usually take one of the two following forms: (*a*) usually a person buying goods


Commercial National Bank 79-52
Madison, Wis. Sept. 1 1916 No. 327
Pay to the order of Richard W. Gaines $25 50/100
Twenty five 50/100 Dollars
To Federal Reserve Bank 2-30
of Chicago
William Banks
Cashier

Facsimile of a Draft

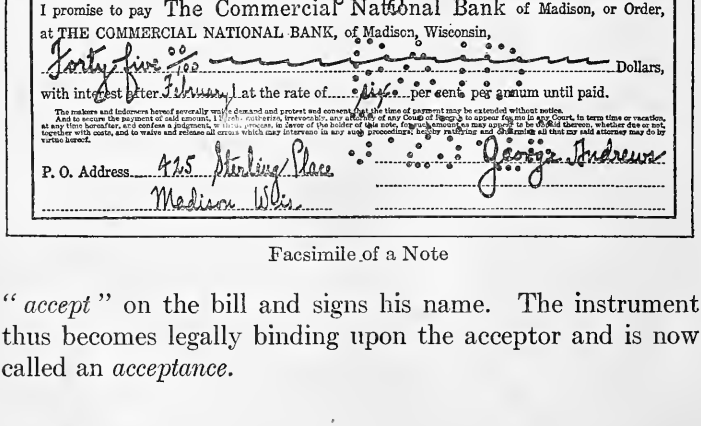
on credit pays the person from whom the goods are bought by money, check, or draft; but, instead, (*b*) the seller may "draw on" the buyer by means of a *bill of exchange.* Let

us suppose that A is the seller and B a buyer in a distant place. A writes an order upon B to pay a bank, C, for A's



Facsimile of a Bill of Exchange

account, the amount of the debt within a stated time, say thirty days. If B on presentation of the order by the bank C acknowledges the debt and agrees to pay it, he writes


$45.00/100
Madison, Wis., February 1 1916
Sixty days after date, for Value Received,
I promise to pay The Commercial National Bank of Madison, or Order,
at THE COMMERCIAL NATIONAL BANK, of Madison, Wisconsin,
Forty five 00/100 Dollars,
with interest after February 1 at the rate of six per cent per annum until paid.
The makers and indorsers hereof severally waive demand and protest and consent that the time of payment may be extended without notice.
And to secure the payment of said amount, I (we) hereby authorize, irrevocably, any attorney of any Court of Record to appear for me in any Court, in term time or vacation, at any time hereafter, and confess a judgment, without process, in favor of the holder of this note, for such amounts as may appear to be owing thereon, whether due or not, together with costs, and to waive and release all errors which may intervene in any such proceedings, hereby ratifying and confirming all that my said attorney may do by virtue hereof.
P. O. Address 425 Sterling Place
Madison Wis.
George Andrews

Facsimile of a Note

"*accept*" on the bill and signs his name. The instrument thus becomes legally binding upon the acceptor and is now called an *acceptance.*

Checks and promissory notes may be *transferred* by *indorsement.* The payee, by writing his name on the back of the instrument, orders the payment of the money to another person whom he may name in writing. By thus indorsing the instrument, he becomes responsible for its payment. The person to whom such an instrument is indorsed, or the *indorsee,* may also in turn become an *indorser,* in which case he also assumes similar responsibility.

Book credit (5) is another form which is extensively used, especially in retail trade. When goods are sold, a record is kept, or, as we ordinarily say, the goods are "charged," a bill for the amount being sent at a later time. Where two persons mutually grant book credit, as is often the case among merchants in small places, only balances need be paid in money on settling day.

II. *Institutions of Credit: Banks and Clearing Houses.* — Bankers have already been mentioned as middlemen in credit transactions. They are sometimes called dealers in credits, and indeed there is little that they do which is not in one way or another connected with credit. But banks are not mere agents. They have at starting the money which represents the capital, and as time goes on they receive money from various sources in the regular way of business. With these funds they are prepared to discount and buy the notes of their customers; but to a very great extent they buy such notes not with cash, but by writing the name of the note seller on a page of the bank books and crediting him thereon with the *proceeds* or *avails* of the note, *i.e.* the amount paid for the note. The note seller thus becomes a *depositor* of the bank. Note that in modern banking, therefore, *a deposit* is only exceptionally the result of an actual depositing of money, though in early times, as the word indicates, actual physical deposits were the

rule. To-day a deposit is usually the result merely of an exchange of the credit of the individual, in the form of a promissory note, for the credit of the bank, represented by an entry in the bank's books. Banks are debtors of their depositors, and creditors of those to whom they lend money. Their source of profit is not exclusively nor even chiefly their own capital, but rather the exchange of credits described above. As a rule, commercial banks either pay no interest on deposits or they pay interest at a rate considerably lower than that charged their customers, *i.e.* their rate of discount, the difference constituting their chief source of profit.

In earlier times nearly all banks in the United States issued notes that circulated as money. Indeed, such note issues were commonly regarded as the principal business of banks. Now only national banks and Federal Reserve Banks are able profitably to issue their own notes. In nearly all civilized countries, the power of banks to issue circulating notes has been greatly restricted, and the number of banks that find a source of profit in such issue is constantly diminishing.

It would take us too far afield were we to enter upon a complete discussion of the various kinds of banks and their precise differences. Briefly, we may say that any institution that (*a*) *discounts* notes or other forms of commercial paper, and (*b*) *receives and holds deposits*, is a commercial bank, whether or not it issues notes, and whether or not it is incorporated by law. The two essential functions of banking, then, are *discount* and *deposit;* the third common function, issue, is not essential or universal. When the word "bank" is used alone it always refers to an institution exercising these two essential functions. *Savings banks* are therefore not *commercial banks*. The four classes of commercial banks in the United States are our national banks, numbering in 1915 about 7500; state banks, num-

bering about 14,000; private or unincorporated banks, numbering about 1100; and loan and trust companies, numbering about 1500. Loan and trust companies are incorporated institutions which perform many of the functions of commercial banks as well as some others, resemblances varying more or less from state to state.

The nature of banking operations will be made clearer by an examination of the following statement of the condition of a national bank.

REPORT OF THE CONDITION OF THE NATIONAL BANK OF ——, N. H. At close of business, June 23, 1916

Resources		*Liabilities*	
Loans and Discounts	$192,706.92	Capital Stock	$ 50,000.00
Overdrafts	29.48	Surplus	50,000.00
U. S. Bonds	30,000.00	Undivided Profits	18,417.89
Federal Res. Bk. Stock	6,000.00	Nat. Bk. Notes outstanding	15,000.00
Other Bonds and Securities	61,492.26	Deposits	243,460.17
Redemption Fund	750.00		
Dep. with Approved Res. Agents	37,960.97		
Dep. with Fed. Res. Bank	5,000.00		
Dep. with other Banks	17,695.16		
Nat. Bk. Notes of other Banks	6,435.00		
Gold and Silver Coin	9,567.00		
Legal Tender Notes	2,750.00		
Gold and Silver Certificates	5,651.00		
Checks and other Cash Items	840.27		
	$376,878.06		$376,878.06

Notice that on the liability side the first three items are liabilities in a different sense from the last two; for the capital stock, surplus, and profits the bank is liable to its stockholders; for circulating notes and deposits, it is liable to outside persons. Also, notice the relation between the total amount of cash on hand and the deposits, and compare the total investment of the stockholders with the amount of loans and discounts. Finally, notice the correspondence between deposits and loans and discounts.

The Banking System of the United States. — Private and state banks and loan and trust companies operate under the laws of their respective states. These laws in recent years have been generally improved in the light of the world's banking experience. Indeed, the legal provisions of some states are perhaps as carefully framed as are those of the federal government. But regarding the matter broadly, one may still say that the federal banking system is superior to the general system of the banks of the commonwealths. State laws are too numerous and various to permit of their detailed description here, but the federal system must be explained, if only in its broad outlines.

At the outbreak of the Civil War, the federal government found itself confronted by the serious financial problem of securing adequate revenue for the prosecution of the war. Unusual revenues would be required, at the same time that the revenues from import duties, which had long constituted the main reliance of the government, were bound to be hard hit by the war itself. In this emergency, new customs duties and internal revenue taxes were imposed, "greenbacks" were emitted in large amounts, and bonds were issued. The outbreak of a war that threatened the very existence of the government created an extremely unfavorable situation for marketing the bonds. Partly to

create a more favorable bond market, partly to secure for the people a uniform system of bank notes, to replace the state bank notes of that time, the federal government passed the National Bank Act, creating a system of national banks, in 1863.

Under the act charters for twenty years, made renewable for like periods, were granted to corporations of not fewer than five individuals, the requirement of capital and surplus varying with the population of the town or city in which the bank was to operate. These banks were required to invest a part of their funds in the purchase of the bonds of the government, against which they are permitted to issue their notes. The notes, thus secured by bonds, were further protected by a redemption fund at Washington, created and maintained through the payment by each bank of 5 per cent of its average outstanding circulation. A ten per cent annual tax was laid upon all other bank notes, a tax so heavy that it promptly put an end to such notes, as was intended. National banks are divided into three classes, "country" banks, reserve city banks, and central reserve city banks. Each bank is required to maintain a "lawful money" reserve representing a fixed percentage of its deposit liabilities.

On the whole the national banking system of the United States has been successful in securing the results for which it was designed. It certainly aided greatly in taking and holding a large part of the bonded debt. It has given us a secure system of note issue. On the whole it has handled, efficiently and safely, the banking business of the country. But the system before its recent modification had two clear weaknesses. First, *the note issue,* while secure, *was inelastic,* — or rather *perversely elastic,* contracting when it should have expanded, and expanding when it should have

contracted. Perhaps even more important is the fact that *the scattering of the country's bank reserves* among so many banks, coupled with the rigidity of the reserve requirements, *prevented* such *common action in times of financial or monetary crises* as might have prevented panics or at the least have minimized the resultant industrial depression.

To remedy these defects in the system the Federal Reserve Act was passed in December, 1913, supplementing and modifying the provisions of the National Bank Act. All national banks are required to come into the Federal Reserve system, and state banks are permitted to do so, by complying with certain provisions.

At the head of the system stands the Federal Reserve Board of seven members consisting of the Secretary of the Treasury, the Comptroller of the Currency, and five others appointed by the President. An Advisory Council of twelve bankers holds occasional meetings at Washington to advise and confer with the Reserve Board.

As the name of the Act indicates, its main purpose is to secure a better handling of bank reserves. For this purpose the country is divided into twelve sections or regions, in each of which is established a Federal Reserve Bank. The capital of these banks has been provided by the member banks in the several districts, each such bank contributing an amount equal to 6 per cent of its own combined capital and surplus. The management of each reserve bank is in the hands of a board of nine directors, chosen in three classes of three each, one director being in each case the Federal Reserve Agent of his district.

Under the present system "country" member banks are required to keep a lawful money reserve of 12 per cent of their demand deposits, of which $\frac{5}{12}$ must be deposited with the Federal Reserve Bank; $\frac{4}{12}$ must be kept in its own

vaults; while the remaining $\frac{3}{12}$ may be distributed in any proportion between its own vaults and the Federal Reserve Bank. For reserve city member banks, the lawful money reserve rises to 15 per cent, and the corresponding fractions are $\frac{6}{15}$, $\frac{5}{15}$, and $\frac{4}{15}$. For central reserve city member banks the reserve percentage is 18, and the fractions $\frac{7}{18}$, $\frac{9}{18}$, and $\frac{5}{18}$. All member banks must also keep reserves equal to 5 per cent of time deposits.

The Federal Reserve Banks — which will be chiefly "bankers' banks" — have as their main business the rediscounting for member banks of "commercial paper" that has been discounted and bought by them. In this way, as well as through the depositing with them of a large part of the reserves of the member banks, the Federal Reserve Banks will be able to "mobilize" the banking strength of each district, and, in an emergency, the banking resources of the entire country.

Former provisions for national bank notes continue in force, except that national banks are now able to sell their bonds and retire their note circulation more rapidly than they could before. It is intended by the Act that the national bank notes will ultimately be retired. On the other hand, the Federal Reserve Banks are permitted to issue bond-secured notes, which we may call Federal Reserve Bank notes, — and a more elastic type of notes based on the security of rediscounted commercial paper held by them, which we may call simply Federal Reserve notes.

Briefly stated, the purposes aimed at in the Federal Reserve Banking system are: (1) *centralization and mobilization of the country's banking power;* (2) *a greater degree of centralization of administration and control;* (3) *the establishment of an open discount market, for the easy and regular rediscount of commercial paper;* (4) *the greater elasticity*

of our bank note circulation, by basing it largely on bank assets rather than on bonds; (5) *lessening of differences in bank discount rates in the various parts of the country;* (6) *affording organized aid to our foreign commerce.*

The Federal Farm Loan Act. — The Federal Reserve Act was designed to perfect our short time bank credit machinery for all classes of borrowers. The Federal Farm Loan Act, which became law July 17, 1916, was designed to provide means whereby farmers, long at a disadvantage in securing loans for the purchase of land, equipment, etc., may tap the sources of funds available for what may be called fixed investment. Its purpose is to mobilize and vitalize credit through a qualitative standardization of farm mortgages, and the issue of bonds thereon.

These bonds are issued and sold principally by twelve regional Federal Land Banks, stock in which may be held by the general and business public, the federal and state governments, and by local groups of farmers, known as National Farm Loan Associations. Each local association, composed of not fewer than ten borrowing farmers, acting through its loan committee in coöperation with a federal appraiser, makes an official valuation of landed property offered by any member as security for a loan. Mortgages given by borrowing farmers pass through the local associations to the Land Bank, where they become security for tax-exempt bonds. The proceeds from the sale of these bonds to the general investing public filter down through the local associations to the borrowers. Federal supervision of the system is afforded by the Federal Farm Loan Board, appointed by the President.

The most obvious effect of the operation of the law is in the strong tendency to lower the interest rates on farm mortgage loans by facilitating the transfer of capital from city to coun-

try and from those sections of the country and the world where capital is relatively abundant to those where it is relatively scarce. Moreover, the system tends to equalize interest rates on farm loans throughout the country, inasmuch as the bonds issued by any one of the twelve banks are guaranteed by all of them, both as to principal and as to interest.

Clearing Houses. — Clearing houses were originally contrived by the employees of banks with the object of saving time and labor. Banks in a city have continual dealings with one another. A regular customer of a bank deposits with it all the checks that he receives, no matter on what bank they may have been drawn. It therefore happens that every bank in any of our cities receives checks every day drawn on the other banks, while the other banks receive checks drawn on it. Formerly there was continual running back and forth among banks to balance their accounts. Now the representatives of all the banks in clearing house cities meet daily in the clearing house and exchange their obligations, only the differences between the sums due being paid. These differences are paid by the debtor banks to the clearing house, and by the clearing-house in turn to the creditor banks.

Clearing house statistics illustrate the inadequacy of money alone to do the business of the modern industrial world. The total transactions of the clearing houses in the cities of the United States for the year ending September 30, 1912, amounted to $168,506,362,000, or about forty-six times as much as all the money in the country, bank notes included; for the money in the country July 1, 1912, in the United States Treasury and in circulation, was only $3,648,870,651. The small proportion of actual money transfers necessary in paying clearing house balances illustrates the same fact. Thus in the decade ending September

30, 1912, the New York clearing house, which includes 65 banks in its membership, cleared transactions amounting to an annual average of $88,699,030,679, by making money payments averaging annually only $3,926,103,384. Thus the money balances averaged only 4.42 per cent of the clearings.

The Advantages of Credit. — It remains for us to sum up in separate paragraphs the advantages and dangers that attend the great development of credit in modern industrial society.

1. *Credit saves time and labor* by furnishing a more perfect and convenient means of payment in large sums and between distant places than is furnished by the precious metals. Thus in international trade, relatively small sums of money have to be sent from one country to another, only balances being paid in money.

2. *Credit saves capital* by taking the place of corresponding amounts of gold and silver. In this way society is enabled to employ a larger portion of the precious metals for other useful purposes, and to devote to other productive enterprises a great amount of labor that might otherwise be employed in still further increasing the world's stock of gold.

3. *Credit renders capital more productive.* Under our credit system he who owns or controls capital, but is not himself an efficient producer, can transfer it for a compensation to another person who can employ it productively, and thus both debtor and creditor, as well as the public economy, are benefited. Other things being equal, capital is loaned to those who will pay the most for it, and under normal conditions these must be the ones who can employ it most productively. There are evidently two sides to this advantage. On the one hand, as we have just said, (a) *credit enables those who have savings, but who are without the disposition or ability to use them productively, so to place these savings that they themselves receive benefit while furthering*

social production. On the other hand, (*b*) *credit enables those who have great business qualifications, but who have inadequate capital or no capital at all, to employ their energies and talents for their own benefit in furthering the welfare of society.* In many cases credit brings together capital without directive power and directive power without capital, and thus serves to unite capital and labor.

4. *Credit furthers the accumulation of capital* by gathering together the very smallest sums, as, for instance, in savings banks. Such small sums, forming in the aggregate large masses of capital, are lent by those who are responsible for them to corporations and other productive concerns. In this way the *capital* itself *is concentrated while its returns are scattered* widely among the people. Moreover, credit furthers the accumulation of capital by promoting thrift, since it both helps and encourages men to provide for emergencies and for old age. This is particularly the case with institutions that supply capital to the poorer classes, and with American building associations, which furnish the same classes with capital for the construction of homes.

Dangers of Credit. — But we must not overlook the dark side of our credit money. Without expanding unduly upon the dangers of credit we may mention some of the more important of them as follows: —

1. *Credit frequently encourages extravagance,* which is a fruitful source of fraud and embezzlement. Men who are granted credit often overrun reasonable bounds, and then in their despair resort to desperate expedients in the hope of release.

2. *Credit prompts precarious speculation.* — Those who speculate with the savings of other people are proverbially careless. Our entire land is strewn with the ruins of businesses wrecked by men who have mismanaged the wealth which unwise credit gave into their hands. When such

management assumes unusually large proportions, credit becomes a powerful factor in precipitating a disastrous panic.

Some writers have claimed that all *productive credit* — credit used in carrying on a business — is good, and that the evils of credit arise only in connection with *credit for consumption,* that is, credit which enables one to spend money for personal gratification; but while there is a modicum of truth underlying this distinction, the line cannot be so sharply drawn. Credit for consumption does frequently lead to extravagance, but it also enables many a young man to develop personal powers and to become a great artist or scholar; on the other hand, productive credit, while normally resulting in great advantages to society, sometimes opens the way to putting business at the mercy of ignorance, incompetence, and dishonesty.

SUMMARY

1. Money having proved inadequate to the needs of modern exchange, credit has displaced it for ordinary large transactions.
2. Credit means the transfer of goods in the present for a promise of an equivalent value to be repaid at a future time. Hence there are two fundamental elements to be distinguished: time and confidence.
3. The chief instruments of credit are checks, drafts, and bills of exchange, promissory notes, bank notes, government notes, and "book accounts."
4. Banks are institutions for facilitating credit transactions and for creating credits; clearing-houses are institutions for facilitating transfers of credit among banks.
5. The American banks have now to a very large extent been brought within an organized Federal Reserve system.
6. The Federal Farm Loan Act is designed to make borrowing on farm mortgages easier.
7. Credit saves the time and labor involved in money payments, it saves capital, promotes the accumulation of capital, and makes a given amount of capital more productive.
8. Credit often leads to speculation and fraud, and sometimes it encourages extravagance and waste in public and private consumption.

QUESTIONS FOR RECITATION

1. What different meanings has the word "credit"? In which sense is it most often used in economics?
2. In what cases is there but little time advantage in credit? Mention cases in which the element of confidence is very slight.
3. What is a check? A bill of exchange? A bank draft? What is a note? A bond? What is the advantage of a note?
4. Describe the national banking system; the Federal Reserve system.
5. What effect does credit have upon the productiveness of capital? Why? Upon the accumulation of capital? How?
6. What are the dangers of credit? How do the evils to society compare with the evils to individuals?
7. What is a bank? What functions are necessary to the idea of a bank? What other function or functions do some banks exercise? How do banks reap a profit?
8. What is a clearing house? About what is the extent of transactions through the clearing houses of the country? How does this compare with the amount of money in circulation?

QUESTIONS FOR STUDY AND DISCUSSION

1. Write a check. Make out a promissory note; a draft; a bill of exchange. Examine a mortgage; a bond.
2. Visit a clearing house and describe its procedure.
3. If you found that the loans and discounts of a bank had decreased, what other item would you expect to show a decrease? Why?
4. In a bank statement is capital set down as a resource or as a liability? Why?
5. "A bank is a manufactory of credit." Explain.
6. What is the federal reserve city of your district? What are the limits of your district?

LITERATURE

See literature at close of preceding chapters. Also: —
Bagehot, Walter: *Lombard Street*, Ch. II, pp. 21–27.
Cannon, J. G.: *Clearing-houses*, Ch. XII.
Conant, C. A.: *History of Modern Banks of Issue.*
Dunbar, C. F.: *The Theory and History of Banking*, Ch. II.
Scott, W. A.: *Money and Banking*, pp. 117–120.
White, H.: *Money and Banking*, pp. 240–255.

CHAPTER VI

INTERNATIONAL TRADE

The subject of international trade calls for somewhat extended study before we leave the division of transfers or exchange. Nations do not live to themselves alone. More and more with the passing years trade is overleaping narrow local limits and is becoming world-wide in extent. International trade is always in the last analysis trade between pairs of individuals, and is in many respects precisely similar to trade among individuals in a single community or country. But there are certain features in which it differs so materially from trade within a narrower area or within a single political unit that it calls for special treatment.

In the present chapter we shall first study the nature of international trade, and shall conclude with a discussion of the restrictions, usually in the form of tariff duties, laid by nations upon international commerce.

I. The Nature of International Trade

Fundamentally Exchange of Services for Services. — Whenever an individual in one country sells goods to an individual in another country, he acquires a claim for money payment just as he would if the purchaser were in his own community. But owing to the difficulty and risk of sending money back and forth in payment of individual claims resulting from innumerable sales and purchases, great bank-

ing houses have developed a system by which the greater part of such transactions are effected without the use of money at all. The system of international exchange is quite like that of the clearing house, which has already been explained. When an American exporter sends goods to an English importer, there are two methods by which payment may be made. More commonly the exporter "draws on" the importer for the agreed amount; that is, he writes an order upon the importer to pay on demand, or within a specified time, the amount named in the face of the bill. This bill of exchange, attached to a bill of lading of the goods and other documents, the exporter usually sells to a bank, which thus purchases a right to have a certain amount of money paid at its order in England. The other method of closing such a transaction is for the English importer to go to an English bank and there purchase a draft drawn by the bank upon an American bank in favor of the American exporter. In either case, if the transaction stood alone, money would have to cross the ocean to pay for the goods. But, as a matter of fact, English exporters are at the same time shipping goods to American importers, and are thus securing counter claims upon Americans. It is evident that if the claims upon the one side equal the claims upon the other, no money need be sent, provided the various claims are brought together and cancelled. It is precisely this function that banking houses doing an international business perform. They buy bills from exporters and sell drafts to importers.

We have here assumed that only two countries are parties to the international exchange. When we consider the case of several nations or of all, there is no difference except in the greater complexity. Thus it is evident that if A in New York owes a sum of money to B in London, while C

in London owes the same amount to D in Paris, and E in Paris in turn owes the same amount to F in New York, the debts of all may be settled without a cent of money leaving any one of the countries.

Because of England's early and continued leadership in international trade, and also because of her preëminence in shipping, drafts on London, known as *sterling exchange*, generally have the widest and readiest acceptance. Thus a Hong Kong merchant is likely to pay a New Hampshire cotton goods exporter by an order on a London banker rather than on a Boston or New York bank. London is therefore often spoken of as the "world's clearing house."

The Rate of Exchange. — Perhaps the idea of an exchange rate may be understood best by thinking of it as the rate at which a person in one place can buy money in another place. In our everyday experience we usually find that we can buy $10 in a place a few miles away by paying $10 in our own town. In other words, we can send our check for $10, which will be cashed without discount or premium. We might say in such a case that exchange between the two places is at par. But, if you read the financial columns of the newspapers, you will note that inland exchange between places more remote is often above or below par, *i.e.* at a premium or at a discount. Thus a New York paper may quote Chicago exchange at a discount of fifteen cents, which means that $999.85 in New York will then buy $1000 of Chicago money. The case is essentially the same in international exchange. Exchange between New York and Montreal offers no difficulty because the United States and Canada have the same monetary unit. When the exchange is between two countries having different systems of money, the rate of exchange has the same meaning, the only difference being that the ratio is between two

different money names, as between dollars and sovereigns, — always stated in terms of dollars and cents; or between dollars and francs, — stated in terms of francs and centimes, — or between dollars and reichmarks, — stated in terms of the cents paid for 4 reichmarks, etc. Now, since the English gold sovereign or pound has the same number of grains of fine gold as $4.8665 in American money, *par of exchange* between New York and London is said to be $4.8665. That is, when exchange is at par, a London pound will buy $4.8665 of New York money or debt, and conversely $4.8665 in New York will buy a pound of debt or money in London.

Par of exchange between any two countries is the rate which brings their two monetary systems to an equality.

Whenever exchange between any two countries is such that a resident in one can extinguish a debt due in the other by a payment representing the exact gold weight of the value of the debt, exchange is said to be at par.

The Balance of Trade. — Assuming for the moment that the only transactions affecting international exchange are the exports and imports of commodities, and that only two countries, say England and America, are involved, we can see that if at any time one country — America, for example — is importing more goods from England than it is exporting, the "balance of trade" is for the time "against" America. In such a state of things, New York banks will have many demands for drafts upon London and few offerings of bills on London. Conversely, London banks will have many offerings of bills on New York, but few demands for drafts upon New York.

But it is the purpose of banks in both places to make drafts balance bills in order to avoid sending specie in payment. Hence the New York banks will seek to discourage

the demand for drafts on London by charging a higher price for them, and will at the same time try to encourage the offering of bills by paying a higher price for them. London banks will in the same way lower the price offered for bills on New York and will sell more cheaply drafts drawn by them on New York. Exchange is then said to be "against" New York and "in favor of" London. A New Yorker wishing to meet a debt of £1 in London will be obliged to pay for the necessary draft more than $4.8665. He will have to pay a *premium*. A London debtor at the same time can with £1 extinguish a debt of more than $4.8665 in New York.

The "Gold Points." — Except under very extraordinary conditions, — such as a great war, — neither New York nor London bankers will charge such a rate for drafts or pay such a rate for bills as will make it profitable for individual debtors to send the specie or bullion instead of appealing to the banks. But there are even narrower limits to fluctuations in the rate of exchange. The bankers themselves naturally have the best facilities for making shipments of money, and as the rate of exchange rises or falls, a point is reached at which it will be profitable for certain banks that specialize in the business to send the metal. The two points, above and below par, at which metal shipments are made into or out of any country were long known as the "specie points," because either silver or gold could thus be shipped; but in recent years, since gold alone is now used to settle balances, the points have come to be called the "gold points." As the bankers' cost of shipment, including freight, insurance, packing, loss of interest, etc., is now about two cents per English gold pound on average shipments, the gold points in English-American exchange stand at about $4.8465 and $4.8865. In other

words, gold is likely to begin leaving New York when exchange rises above $4.8865, and is likely to begin leaving London for New York when exchange falls below $4.8465.

Again we must remind the student that for the sake of simplicity we have assumed trade to be confined to the two countries mentioned. When the case of international trade in general is taken into account, the subject becomes too complicated for brief explanation. We may simply say, then, that the rate of exchange between New York and London, London and Paris, Paris and Berlin, etc., is affected not only by the volume and balance of trade between the two countries, but also by the volume and direction of trade balances in the trade of the other nations.

Automatic Steadying of Exchange. — As a matter of fact, gold shipments between nations are surprisingly small and infrequent, considering the magnitude and diversity of the trade. This is because there is constantly at work an automatic system of "checks and balances" comparable to the delicate contrivances of automatic machinery. Thus, to illustrate, as soon as sterling exchange rises in New York above $4.8665, every prospective American purchaser of English goods or services is faced by the prospect of paying more than $4.8665 of American money for £1 worth of such goods or services. Whether he is contemplating the importation of English books, or is planning a visit to the English Lake Country, he is warned by the rise in the rate of exchange that he must now pay more than before. Of course few know or note the fact, but in the immense field of possible business between the two countries, it is enough that some persons do know and realize the change. Americans as a whole will buy fewer English goods. At the same time and by the same change every possible English purchaser of American goods of any sort may thus learn that

he can extinguish a possible indebtedness on better terms. Thus, if he is thinking of buying American goods listed at $486.65, he may discover that at the new rate of exchange he could extinguish the debt incurred in purchasing them by paying in London less than £100. Here again it is unnecessary to assume that all Englishmen are aware of the changed rate or are influenced by the change. But it is clear that the rise in the rate makes it easier for Americans to sell to England and harder for them to buy from England than before. The resulting stimulation of sales and check upon purchases will increase the offering of bills on London against English purchases and lessen the demand for drafts on London in payment of American purchases. This in turn will tend to bring the rate of exchange back to par.

The Safety Valve. — If, however, this automatic check at any time is not strong enough to hold exchange within the gold points, when one of those points is reached, the "safety valve" of gold shipment automatically opens and "lets off the steam." Let us suppose, for example, that sterling exchange has risen in New York to $4.89, and that considerable gold shipments are being made by New York bankers. The London banks find their gold reserves increased and are encouraged to increase their loans to customers in the form of greater deposits. New York bankers, finding their gold reserves depleted, restrict their deposits by calling loans and granting new ones more reluctantly. The whole country in each case feels the result, — in England by an increase in the medium of exchange, — both money and credit; in America, by a corresponding restriction. English prices tend to rise; American prices tend to fall. Hence results an even greater tendency to increased English buying in America, and to lessened American buying in England. To be sure, the change in prices

is so slight that it is not ordinarily noticed. It might perhaps be said rather that Englishmen desiring to buy American goods find it easier to get the "money" with which to buy, while Americans are finding that money is "tight," and hence buy less. In whichever way the situation is described, the practical result is the same, to prevent the rate of exchange from rising more than a very little above the gold point and ultimately to bring it back to par. And of course the same explanation, with the necessary change of names and terms, would apply to the opposite case of sterling exchange in New York falling below par.

Actual conditions are of course indescribably more complex. Trade is not confined to two nations; international balances depend upon other things as well as upon the transfers of goods; the currency of different nations is not in all cases of equal stability or honesty; many nations are themselves great producers of gold and therefore regular exporters of that metal. Still it remains true that through the operation of such natural causes as we have just described, the various debts of one nation to the world and the debts of the world to that nation do in the long run tend strongly to balance; and that gold shipments from nation to nation are relatively small.

Such shipment as does take place serves the economic function of distributing and redistributing the world's stock of gold among the nations according to their only slowly varying monetary needs, in such a way as to maintain a substantially even general price level throughout the industrial world.

The above explanation should make it clear to the student once for all how ridiculous is the common idea that any nation either does or can become rich by "selling more each year to the rest of the world than it buys, storing up

the gold paid on balance." Even the individual man in our day does not "get rich" in such a way. If he is paid more than he pays out for consumable goods, he spends the extra money at once in buying productive or other goods. He does not store up the money. It must be admitted, however, that an individual could get rich by storing up money if he were foolish enough to choose that way, and were lucky enough to find the things or services he could sell more valuable than the things he had to buy. But he could get rich in this way only because his "pile of gold" would be so very small as compared with his country's "pile of gold" and mass of credit that prices of goods would not be disturbed appreciably by his hoarding. With nations, as we have seen, the case is different. If America could — as she cannot — go on year after year selling much abroad, buying little from abroad, and storing up the difference in gold, the result would simply be that American prices would go up by leaps and bounds. As a people we should have a great deal of money, but we could buy no more with our gold, — we should be no richer. Let it be repeated, however, that we could not do what we have for a moment assumed; for, as our prices rose, it would become impossible to keep on selling our high-priced goods in other countries or to prevent our people from buying their goods in the low-price markets of other countries.

War and International Exchange. — The explanation here given of international trade and international exchange is of course based upon the assumption of peace among the trading nations. Modifications would obviously have to be made in case of war. Thus during the great European war the cost of gold shipment no longer exercised a decisive influence in determining the gold points. Instead, the gold

points may be said to have been determined by the arbitrary action of governments and powerful banking coalitions.

During that war the belligerent nations counted it a matter of life and death to keep as many men as possible in the trenches. With their labor supply thus depleted, the nations found it almost or quite impossible to produce food, clothing, and munitions for their soldiers in addition to the goods required by the workers and the rest of their people. Under these circumstances, every nation tried desperately to draw upon the productive resources of neutral peoples. But they were obviously in no position to pay for the unusual merchandise imports with even their usual merchandise exports. They might, to be sure, have paid for part of the excess by heavy shipments of gold; and indeed the United States during the first thirty months of the war did import over $600,000,000 of gold. But "the balance of trade in favor" of neutral nations was far in excess of this amount. To have attempted to ship more than this amount, — indeed the shipment even of such an amount, — was of almost equal danger and disadvantage both to the belligerents and to the United States, as was everywhere seen and admitted by intelligent American bankers.

Under these circumstances, the rate of exchange between New York and London fell and long continued below $4.75, and even at one time reached $4.50. A simple explanation would be to say that for the time being England was unable to continue paying for desired imports in cash, and was therefore compelled to pay a higher price for the goods, — on credit, — as reflected in the unfavorable exchange rate.

When the London rate fell below $4.60, the difficulties of trade became so great for both countries that a half-billion dollar Anglo-French loan was negotiated with Amer-

ican bankers. This provision for regular and national credit, taking the place of the earlier irregular and individual credit, enabled English importers to buy American goods on more favorable terms, — in other words, raised the rate of exchange nearer to parity.

During the nineteenth century and the early years of the twentieth century, English shipping had been so dominant, and English investment and commerce had been so great and widespread over the earth, that it had become customary to make payments everywhere by drafts or bills on London, drawn in terms of pounds, shillings, and pence. Thus, a Chinese importer would pay even an American or French exporter by a draft drawn on London. The disturbance wrought by the war threatened the continuation of this practice. New York, the money capital of the greatest and wealthiest neutral, offered certain advantages as an exchange center or world's clearing-house, and to an increasing extent drafts in payment of international purchases were drawn on that city, in terms of dollars and cents. This is what is meant when it is said that the great war threatens to substitute "dollar" exchange for sterling exchange in international trade.

Peculiarity of International Trade. — As was said at the beginning of this chapter, international trade is not fundamentally different from other trade or commerce. But it has certain features which are in varying degree peculiar. Labor and capital move from place to place or from industry to industry with a far greater degree of freedom within national boundaries than across national boundaries. Differences of language, customs, and laws, ignorance, fear, prejudice, poverty, sentiment; these and a host of other influences stand in the way of migration of labor and capital from country to country.

Capital on the whole is probably more mobile than labor. Both move more freely from some countries than from others; more freely to some countries than to others. Both move more freely at some times than at others. On the other hand, freedom of movement is of course not complete even within a single country. A New England worker is tied to his town, state, and section by a multitude of ties. Capitalists who have made their money in pork may not be eager to invest in establishing a "Journal of Opinion" or a "Journal of Civilization." But allowing for all these difficulties in the way of a hard and fast classification, it none the less remains true that labor and capital, generally and in a peculiar degree, are nationally confined. And this broad fact has necessitated certain economic explanations, certain economic theories, which we must now seek to understand.

The Doctrine of Comparative Costs. — The first of the theories to which we have just referred is known in economics as the "doctrine of comparative costs." It may be briefly stated as follows: *trade between any two nations is determined, not by difference in the absolute cost of producing the goods exchanged, but by difference in their comparative cost. Specifically, each nation will produce for export those goods in the production of which it enjoys the greatest comparative advantage, or suffers the least comparative disadvantage.* And now to illustrate and explain.

Let us, as before, assume that there are only two countries, A and B, and let us assume further that in each country only two economic goods are concerned, x and y. Let us assume further that in A, 1 unit of x can be produced with 1 day's labor, and 1 unit of y with 2 days' labor; while in B, 1 unit of x requires 2 days' labor, and 1 unit of y requires 5 days' labor.

If trade were determined by difference in absolute cost, no trade could take place on these assumptions between A and B. A would produce and consume both x and y, which would exchange within the country *in proportion to their* absolute cost, *i.e.* in the value ratio of 2 units of x for 1 unit of y. B would produce and consume both x and y, which would exchange within the country at the value ratio of $2\frac{1}{2}$ units of x for 1 unit of y. To test the matter numerically, let us assume in each country 2100 days' labor available in any period for production. Assuming now for a moment that each country produces both goods, let us see how the case would stand. In A 700 days spent in producing x would give

	A		B
x	1	⟵	2
y	2	⟶	5

$$700 \text{ units of } x;$$

1400 days spent in producing y would give

$$700 \text{ units of } y.$$

In B 600 days spent on x would result in

$$300\ x;$$

1500 days spent on y would result in

$$300\ y.$$

Without trade, then, A could have by the assumed division of its labor, $700\ y + 700\ y$,
and B could have $300\ x + 300\ y$.

And now let us suppose instead that the doctrine of comparative cost is correct, according to which A would produce and export y, while B would produce and export x. A's 2100 days' labor would give 1050 units of y. If she kept and consumed only what we have assumed in the first case she would have had for consumption, she would have left 350 units of y for export and would gain by the trade by

importing in exchange anything more than 700 x. B in the same way would produce with 2100 days' labor 1050 x; and if she kept for consumption the same amount as in the illustration above, 300 x, she would have left 750 x for export, and would gain by the trade by importing in exchange anything more than 300 y. Bringing the two together, now, we find that A can afford to sell 350 y for anything above 700 x, while B can afford to sell 750 x for anything more than 300 y. Between these two value ratios $\frac{700}{350}\left(=\frac{1}{2}\right)$ and $\frac{300}{750}\left(=\frac{2}{5}\right)$ *i.e.* the ratios of absolute costs in the two countries respectively, — both nations can gain by exchanging. Where the ratio of exchange — in other words, the international values — would stand in such a case, and how the ratio would be determined, remain to be considered later. For the moment let us center our attention upon the fact here demonstrated: *Even though in one of two countries the absolute cost of production of every commodity were greater than in the other, yet exchange would take place between them if the comparative costs were different, the one country producing and exporting the commodities in the production of which it had the least relative disadvantage, and importing in exchange commodities in the production of which the other country's relative advantage was greatest. And the ratio of exchange — in other words, the value — would in each case be somewhere between the differing ratios of absolute cost in the two countries.*

International Values. — We are now prepared to consider the second of the theories or explanations that arise from the immobility of labor and capital as between nations. If goods do not necessarily exchange in international trade in the ratio of their cost of production, what does deter-

mine their value, — that is, their ratio of exchange? We have just seen that the ratio or value may be anywhere between the two ratios of absolute costs that would obtain if each nation produced both commodities. Let us now go a step farther.

Let us suppose that in one of two countries just beginning to trade with each other it is found that the greatest satisfaction of wants results when raw cotton and manufactured silk are produced by an expenditure of labor indicated respectively by 15 cents a pound and 50 cents a yard, but that in the second country it is just worth while to produce the same commodities at 10 cents a pound and 75 cents a yard respectively. Assuming these to be the only two commodities to be exchanged and ignoring the cost of transportation, we may suppose matters to proceed as follows: Silk will be sent from the first country to the second in exchange for cotton. The price of the silk will be somewhere between 50 and 75 cents; that of the cotton between 10 and 15 cents. The precise value in each case will be such that in the long run the values of the cotton and silk exchanged will be equal. Suppose it were not so; imagine such prices that $1,000,000 worth of silk would be exported from the first country and only $500,000 worth of cotton imported. At first the balance might be paid in gold, but the drain of gold from the second country would so lower prices there as to discourage the further importation of silk, and the influx of gold into the first country would so raise prices as to encourage the importation of cotton into that country. This would continue until an equilibrium was established.

If now we take the case of many commodities instead of two, the explanation still holds. This theory or explanation, then, may be summed up as follows: *Values in inter-*

national trade will be such as to equate reciprocal international demand, and equate the general level of prices in the trading countries. This theory, clearly developed by John Stuart Mill, is known as the theory of the equation of international demand.

The Advantages of International Trade. — We have already explained that international trade does not offer to any nation the possibility of "getting rich" by heaping up "treasure" secured from a so-called favorable balance of trade. The real advantage in international trade is that (1) *it enables every country to enjoy goods which it does not itself produce; and* (2) *enables each country to secure a maximum of satisfaction and an economy of its efforts and resources by devoting its resources and energies to the forms of production in which it enjoys the greatest relative advantage, or in which at worst it suffers the least relative disadvantage.*

II. Restrictions on International Trade: Protectionism

Objects of the Restriction. — Nations have always laid restrictions upon international commerce, and an examination of the history of such restrictions discloses at least four motives for imposing them. (1) In the first place, we may note that ancient nations, the Greeks, the Hebrews, and others, *dreaded contact with foreigners,* and attempted by restrictions on international trade to reduce such contact to a minimum. (2) A second very common cause of restriction has been the desire *to make international trade a source of revenue.* Sometimes a tax has been laid upon both exports and imports. England taxes imports with a sole view to securing the greatest possible revenue. (3) In the third place, tariffs have at times been laid with the

idea of securing *a supply of the precious metals,* through a so-called "favorable balance of trade." No enlightened nation now pursues this course. (4) Finally, many nations to-day regulate international commerce with the object of securing revenue, and at the same time *weakening foreign competition,* in order that home producers may be encouraged and supported. Restriction for this purpose takes the form of laying duties upon imported commodities of a kind that can be produced in the home country. Such taxes are called protective. Collectively they form what is called a protective tariff. Home producers, it is said, are thus "protected" against foreign competitors. Of course in some cases it is possible that more than one or even all of the objects of regulation that have been mentioned may be sought by the country which thus regulates its commerce with other nations.

The general subject of protection is so vast that a complete discussion of it would fill volumes. We must be content here to study briefly the chief points in controversy between advocates and opponents of the system, to give attention to certain general considerations of importance, and to suggest what desirable changes may be made in the American tariff system upon which all should unite.

Argument of Protectionists. — Protectionists argue that the system which they favor *promotes nationalism,* or a strong sense of national unity. Domestic trade, they say, should be encouraged because it draws the citizens of a country together, while international trade is cosmopolitan and tends rather to the separation of citizens one from another. It is argued that nationality and a strong national feeling depend upon a sense of national strength and independence, which can exist only when the nation has widely diversified industrial interests, and therefore pro-

tective duties should be levied to encourage such a *diversification of industry.* American protectionists insist that in a new country there exist many great natural advantages of which the inhabitants cannot avail themselves unless they are protected, at least temporarily, from the competition of foreign producers, who have the advantage of long experience. The (1) *diversified-national industry* argument and the (2) *protection-to-infant-industries argument* — the ones upon which protectionists most strongly insist — are thus seen to be supplementary. Protectionists urge that the older nations, by reason of their acquired skill and capital, can destroy in their infancy any new pursuits that a younger rival is seeking to establish. Closely connected with this argument is another based on (3) *military grounds.* Industrial self-sufficiency is a great aid to a nation in times of war, because such a condition lessens the distress due to possible military disasters. Hence it is claimed that nations at peace should prepare for war by protecting, nursing, and fostering the widest possible range of domestic industries. The force of this contention was admitted by Adam Smith, who is frequently called the Father of Political Economy and who has probably done more for free trade than any other man, and it was emphasized by George Washington. In our own time, the great European War has given new significance to this argument and has shown, as many think, that adequate industrial self-sufficiency has a far wider scope than people heretofore were willing to admit. (4) The *home market* is also claimed to be *superior* because more secure, — less liable to the shock of war or international complications. (5) Special advantages are said by the protectionists to be conferred by their system upon farmers, who are *saved the expense of long shipment* when they have a sufficient market for their crops among home manufacturers. It has even been maintained

by one American protectionist (6) that no nation can be permanently prosperous unless the elements taken from the soil are returned to it in the form of manure and other fertilizers, and that this *process of repair is possible* only *when agricultural products are consumed at home.* Another common protectionist argument, which has been much used since the labor movement first became prominent, is (7) that the protective tariff has been *the cause of high wages* paid to American labor, and that it will be necessary to maintain the protective tariff if we would maintain the high wages.

Differences in the economic situation of other countries lead in them to certain protectionist arguments that differ from those in the United States. For example, in Germany it is urged that under free trade in grains, the German population will increase beyond safety so long as the rich new lands of Canada, Argentina, and other parts of the world are being wastefully exploited in "robber" agriculture. At length, the argument runs, these lands will have to give up such wasteful methods, and the price of foodstuffs must inevitably rise. Hence, it is argued, by imposing a tax on imports of foodstuffs, a greater proportion of the German people will be induced to continue careful farming, and population will be held in check. Also the military argument is strongly emphasized in Germany, and Germans probably believe generally that the situation in which the European War has placed them amply justifies their policy.

In England, in recent years, emphasis has attached to the argument, that imperialism, which could be furthered by tariff concessions granted to one another by the mother country and her several self-governing colonies, is prevented by the English free trade policy, since that policy gives no room for tariff concessions. A further argument frequently put forward in England, to much the same effect, is that

with a system of protective tariffs England would be able to secure trade favors from other nations by playing her trade restrictions against theirs. And in England also the argument from military grounds has greatly strengthened the protectionist sentiment.

The Argument against Protectionism. — The name "free trader" is generally applied to the opponent of protectionism, but "free traders" in the strict sense of the term are in fact hardly to be found. Practically all of those who are called by the name are really advocates of a policy which is properly described as that of a "*tariff for revenue only.*" And many even of this group would be willing to see the tariff schedules so chosen and framed as to allow *incidentally* a certain measure of protection.

A thoroughgoing "free trader" would have no tariffs on imports. His argument would run about as follows: Taxes on imports, with very few exceptions, are borne by home consumers. Therefore, in the last analysis, the people of any nation must pay their own expenses; they cannot shift them to the shoulders of foreigners. Taxing imports is therefore a vicious policy because it leads people to think that others are paying the taxes. Moreover, taxes on imports are indirect taxes, paid by the importer, but shifted by him in higher prices to the final consumers. Indirect taxes, it is argued, are furtive, dishonest, undemocratic, inequitable, bearing with relatively greater weight upon the poor. Such taxes restrict international commerce and stand in the way of international good-feeling, friendship, and peace. If the burning of all our customs houses would prevent a single war, the national gain would be incalculable.

But, as we have said before, there are practically no free traders to be found, — not so many as the real merit of their argument would lead one to expect.

The argument that follows is not that of the "free-trader." It is rather the argument for a "tariff for revenue only." Perhaps, better yet, it might be called the argument against protectionism.

In opposition to protection it is frequently alleged (1) that protective tariffs are a *violation of the "natural right"* of every man to buy and sell wherever he will, untrammeled by human laws. We may dismiss this "natural right" argument at once as a "dogmatism in disguise." It is a question-begging argument, since, in the use of the word "natural," it assumes the very thing that must be proved before the argument can have weight. All history, and the opinions of all great modern thinkers, are against such an assumption. It would be well if this argument were heard less often.

Again, (2) it has been claimed that protective tariffs in the United States are *unconstitutional.* But this argument is idle and futile. The opinions of our best jurists have always maintained the constitutionality of our tariff legislation, and there is not the slightest chance that the Supreme Court will ever pronounce a protective tariff unconstitutional.

The really cogent arguments of the advocates of a *tariff for revenue only* are those which aim to show that, on the one hand, the protectionist policy fails to accomplish the end sought; and that, on the other hand, it actually does work positive injury to national interests.

In the first place, (3) they claim that protection is *not necessary to the development of national feeling.* In proof of their claim, they point to the fact that the last half century, which has witnessed an unprecedented spread of international trade, has also witnessed a wonderful growth of national sentiment throughout the world.

Opponents of protection claim also (4) that protective tariffs are *not necessary to produce diversity of industry* in the case of a country like ours. It may be admitted that a purely agricultural nation is not likely to progress rapidly; but it is not easy to understand how a country so vast as ours, of so varied a climate, of boundless natural resources, could be anything but a country of diversified industry, if industry itself is left unhampered by burdensome restrictions and regulations.

The General Influence of Protective Tariffs. — But the fundamental, inclusive, and by all means strongest economic argument against protection is as follows: (5) *whenever a new industry is started in any country as a result of a protective tariff, it is started by withdrawing or withholding the necessary capital and labor from some other industry which is by nature more profitable, and therefore every such new industry really means a decrease in the possible productiveness and wealth of the country.*

This general argument in its affirmative form may be stated as follows: *with nations as with individuals each party to trade will regularly secure the greatest advantage if the trade is left unrestricted, since then and only then will the nation's labor and capital enter into those employments that are naturally most productive.*

It would seem in general that this statement must be true. If any proposed new industry has natural advantages that indicate the real economy of starting it, then there can be no reason for protecting it by a tariff wall against foreign competition. Hence the claim that the industry needs protection is itself an admission that it is an uneconomical industry. And if it is fundamentally uneconomic, because the labor and capital applied to it will produce less than they are now producing, then no tariff can make it economic.

Of course, this does not mean that those who invest in the protected industry cannot make profits. We could probably force the production of bananas in Maine, tea in Indiana, and rubber in Oregon, if we prohibited importation of those goods, and offered to possible home producers a sufficiently high price. And the Maine banana grower might conceivably be paid so much that he would make big profits. But his profits would clearly be at the cost of his fellows. The nation's capital and labor as a whole would be made less productive. The growing of such products would be against public economy.

By way of qualification, most economists admit that such new industries may attract to the country some foreign capital which would otherwise be invested elsewhere. They also admit that new industries are sometimes prevented, not by lack of natural advantages, but because they cannot at once acquire the specialized skill and capital which the foreign competitor enjoys by reason of his longer establishment; and that if such "infant industries" rapidly reach a condition of self-supporting independence, the nation may be repaid for the expense incurred in *hastening* the establishment of such industries. But they justly protest against applying the name "infant industries" to businesses that have received tariff protection from the country for nearly a century. Indeed, (6) the fact that "*infant industries*" have thus prolonged the period of their infancy, and, in some cases, *have clamored for protection even when they are or should be self-supporting*, furnishes one of the strongest arguments against a policy of protection. If such industries do not become self-supporting, they continue to hold prices up beyond a reasonable point; if they do become able to withstand competition, but still have protection, they may by combining maintain a higher price than open competition

would establish. The last few years have shown beyond question that protection favors monopoly by shutting off healthful international competition. It has usually been claimed by protectionists that the competition of home producers would suffice to keep prices down. Now, however, we are confronted by the obstinate fact that in the case of a number of protected industries, combination is taking the place of competition; and home producers compete at low prices in foreign markets, while charging their countrymen such higher prices as protection enables them to exact.

Does Protection protect Labor? — It is further maintained (7) that *the argument* of the protectionists *that a protective policy benefits the laborer will not bear close analysis.* For nearly two centuries before any protective tariff existed in what is now the United States, the high wages of American workingmen had been repeatedly noted and explained. Land could be had for the asking, and men would not consent to work for hire unless they could receive a wage high enough to tempt them away from independent peasant proprietorship. The same condition has existed during the last century, and almost down to the present day. The whole question of the connection between the tariff and wages involves a discussion of many complex economic problems. It must be sufficient here to suggest a single important consideration bearing upon this question. *Labor competes directly, not with commodities, but with labor.* The worker himself wants commodities, and the more of them he can secure for his labor, the better. In other words, it is not high money wages alone but high wages in connection with low prices that indicates national welfare and prosperity. If, then, labor is to be protected, a tax should be put on the importation of labor rather than upon the prod-

uct of labor. Otherwise, the workman may find his wages lowered by the competition of a multitude of imported workers, while he finds the cost of living unduly raised by the protection which has been granted to the domestic entrepreneur.

The Political Argument. — Our statement of the argument would be incomplete if it did not find a place for what many regard as the strongest indictment against protectionism. Opponents of that system hold it responsible for a great part of the corruption alleged against government in the United States. According to this view, the vested interest in established protection has been the very center of the forces of vested interests of all sorts that have constantly beset Washington to seek new and valuable privileges and to safeguard those already conferred upon them. Although this may be an exaggerated statement of the evil, it can hardly be doubted that (8) *protectionism* as a system *has done much to increase the difficulty of securing just and honest government.*

The Fiscal Argument. — Finally, it is contended against protectionism that (9) *a tariff for revenue only is to be preferred on purely fiscal* or financial *grounds.* In support of this contention, it is claimed that such a tariff, in contrast with a protective tariff, would *tax fewer commodities,* would be *simpler to comprehend and to administer,* and would *cost* much *less per dollar of revenue* collected.

General Considerations. — Certain general considerations remain to be suggested. In the first place, the importance of this whole question has been much exaggerated. England prospers with a tariff for revenue only, the United States has prospered under protection. How far England's prosperity has been due to her tariff system, how far the prosperity of the United States has been in spite of protection,

we cannot tell. The tariff system is one of very great, but not of vital, importance. Moreover, the domestic trade of the United States is vastly greater and more important than her foreign trade. Indeed, the domestic trade of the Mississippi valley alone is far greater than our entire foreign commerce. Under the federal constitution, all trade among the states is free trade. Evidently, then, we can thrive as we have thriven under protection, *since by far the greater part of our trade is already free trade.*

In the second place, statistics regarding national prosperity, as they are usually presented, throw little light upon the question one way or the other. The tariff policy of modern countries has undoubtedly been a minor factor in their industrial life. Inventions and discoveries, the spread of general and technical education, the hopeful ambition of all classes of our people, the growth of intelligence, have been chief among the forces that have made such astounding additions to the wealth of the world during the past century.

In the third place, the American tariff system, bad as it undoubtedly is in many respects, is a historical growth that has taken deep root. It conditions directly or indirectly a great part of our industrial life, and it cannot therefore be suddenly eradicated with impunity. Yet it is impossible to tolerate permanently a bad condition of things, and we are justified in demanding that there shall be progress in our tariff policy. Even selfish considerations are likely to lead to a further demand for lowering our tariff schedules, now that other powerful nations are retaliating or threatening to retaliate for our unneighborly tariff treatment of them.

Finally, for the reasons above indicated and for many others, it seems in the highest degree desirable that tariff changes in future should be less the football of partisan politics and more the subject of intelligent expert study.

It is of course impossible, as it is undesirable, that in a democracy so great a question as that of the tariff should be removed from politics; but the politics should be clean politics that would accord a large place to expert opinion and advice. In other words, all future tariff legislation should be initiated by an expert tariff commission, — preferably permanent, — which should carry on its investigations under conditions of the fullest publicity and keep the public regularly informed of changing conditions on which changes in tariffs should be based. The people of the United States seem now to have reached general agreement regarding this matter, and such a Tariff Commission as is here advocated has already (in 1916) been established by Congress.

SUMMARY

1. International trade, in its elements a trade among individuals for money, is in final effect a trade among countries of services for services.
2. The balance of trade is the chief element in determining the rate of exchange.
3. International trade is peculiar in that labor and capital do not flow from country to country so readily as from section to section of the same country.
4. International trade depends not on differences in absolute cost but on differences in comparative costs.
5. International values are determined by the equation of reciprocal demand.
6. General prices and the national money supply are regulated by trade conditions.
7. Regulation of international commerce, for widely varying reasons, has been common among nations.
8. Protection is defended as promoting nationalism, diversification of industry and industrial independence, saving costs of transportation, keeping up the soil, and maintaining high wages.
9. It is attacked as being unnecessary to the development of industry, as opposed to "natural rights," and as being unconstitutional. It is further claimed that a protective tariff regularly diverts labor and capital from industries

that are more productive by nature to industries in which the employment of labor and capital is naturally less productive.

10. Protection often fosters and protects monopolies, and is a source of political corruption. Fiscal considerations strongly favor a revenue tariff system.
11. Our tariff system, as a historical growth, must be modified conservatively and carefully.

QUESTIONS FOR RECITATION

1. What are the advantages of international trade?
2. How is the rate of exchange determined? What is meant by "par of exchange"? What are the "gold points"?
3. What relation has international trade to the distribution of money among nations? To general prices in different countries?
4. What goods does a nation export? What is the doctrine of comparative cost?
5. How are values determined in international trade?
6. What is protection? Discuss the arguments offered in its support. In opposition.
7. What is the argument of the thoroughgoing free trader?
8. Why have American wages always been high? What bearing has this on the protection argument?
9. What is the political argument against protection? The fiscal argument?
10. What objections are there to a sudden change in the tariff system?

QUESTIONS FOR STUDY AND DISCUSSION

1. What is exchange parity between New York and Paris? New York and Berlin? New York and Hoboken, N.J.?
2. If one of two exchanging nations has a depreciated currency, what bearing has this on the rate of exchange?
3. What was the effect of the European war on the rate of exchange?
4. Is labor mobile within the United States? between the United States and Canada? between the United States and Turkey?
5. What is meant by "timidity of capital"?
6. Would it be economically desirable to-day to grow tea in the United States? With a prohibitive tariff on tea, might it be "profitable" to grow tea here? If tea were grown here behind the protecting wall of a tariff, with profit to the

growers, would that be a sufficient argument against abolishing the tariff?

LITERATURE

In favor of protection: —

Carey, H. C.: *Manual of Social Science.*

List, F.: *National System of Political Economy*, Introduction, and Bk. II, Ch. XVI.

Patten, S.: *Economic Basis of Protection.*

Thompson, R. E.: *Protection to Home Industry*, and *Social Science and National Economy.*

Against protectionism: —

Bastiat, F.: *Sophisms of Protection.*

Perry, A. L.: *Principles of Political Economy*, Ch. VI.

Sumner, W. G.: *Protectionism.*

Taussig, F. W.: *Principles of Political Economy*, and *Some Aspects of the Tariff Question.*

Nearly all standard economic treatises on Economics arrive at a conclusion generally opposed to protectionism. In England and Germany some economists of repute have favored a protective policy for their own countries. A large body of literature on the question has been produced in those countries within recent years.

PART IV. DISTRIBUTION

CHAPTER I

INTRODUCTORY

The Meaning of the Word "Distribution." — Having studied first the human wants that lead to economic activity, and the satisfactions that result from consumption; having studied in the second place the production of goods and services for the satisfaction of human wants; and having in the third place studied the subject of transfers of goods and services, and especially of their exchange among producers or between producers and consumers, we come now to a study of the distribution of the income of society, especially among the factors that have united in its production. Under the heading Distribution we might, and to some slight extent shall, consider the division of the social income among individuals; but that part of the entire subject of distribution is so vast and so complex that we cannot in such a book as this attempt a complete treatment of it.

There is one sense in which the word "distribution" is *not* used here. We shall not use the word in the sense of moving goods from the place where they are produced to the place where they are consumed. When we speak of railways or retail stores as "distributive agencies," we are using the word in a sense wholly different from that of the

technical term which describes one of the four main divisions of economic analysis.

Before passing on to study the determination of the great shares of the annual product of industry, it will be well for us to pause for a moment to consider certain general ideas that underlie all the special topics that are to follow.

Social Wealth and Social Income. — *All the economic goods that society has for use at any time constitute the social wealth. The satisfactions that flow from the social wealth and services during any period of time constitute the social income for that period.* Social wealth is, therefore, a *fund or reservoir* from which issue one of the great *streams* of social income, the other proceeding from services. The body of social wealth in any two nations may be of the same volume, while the stream of social satisfactions may be of very different volume in the two cases; for the size of the social income depends not alone upon the size of the social wealth, but also upon the completeness with which that social wealth is utilized and upon the services rendered. Well-being, moreover, is increased by the satisfactions flowing from the use of free goods, and is not dependent merely on income.

Private Income. — The social income is of course shared among the members of society. *That part of the social income which the individual enjoys is his real private income. The money which an individual receives during any period of time constitutes his money income or nominal income.* It is important to keep this distinction in mind, since equality of money incomes may coexist with great inequality of real incomes, and vice versa. Thus it is a commonplace to-day that city workmen regularly receive higher money wages than the same classes of workmen in the country; but the differences in cost of living would go far to make the real

incomes of the two classes equal. Again, a house occupied by its owner yields a real income to him, though this does not enter into his money income at all.

Private Property. — Private incomes depend upon the institution of private property. Every change in the laws of property is bound to change to some extent the production and exchange of goods, and hence the amount of the social income, but to a still greater extent and more immediately every such change reacts upon the distribution of the social income among those who share it. The importance of our property laws is therefore evident. These laws have sometimes been of such a character that they have wrought injustice to great classes of people, *e.g.* the laws making human beings private property.

The Shares and Share Receivers. — As we have said, the distribution on which attention will be centered in the following pages is the distribution of the product of industry among the great factors that have united to create it. The factors considered in the study of production were land, labor, and capital; and in that order we shall consider the distribution of the product among them. The shares of these three factors are known as *rent*, *wages*, and *interest*. But the entrepreneur — he who secures and directs the organization of the factors — is also an important share receiver in modern industry, and hence we shall study the principles governing his share of the product, called *profits*. Some writers, in view of the great part played in all production by the State, treat separately the share received by the State. All that for our purposes needs to be said regarding the State's share in the product of industry will be presented in the final chapters of the book, under the head of Public Finance.

Relation of Individuals to the Four Shares. — And now just a word as to the relation which share distribution bears

to distribution among individuals. Individuals regularly receive their incomes by virtue of their proprietary relation to one or more of the factors of production. Thus, when we are discussing the share of the annual produce that goes to land, we are at the same time explaining the principles which determine the size of the rent income of the farmer himself. Similarly, an inquiry into the shares received by capital, labor, and entrepreneurship brings us more or less closely to the question of the income of the individual capitalist, laborer, or entrepreneur. But it is the share of the factor as a factor that we shall study primarily, noting only incidentally the results of the distribution upon the income of individuals. The importance of this distinction appears when we reflect that a *justification of the share of industry that goes to land or capital is not a justification of the landlord's or the capitalist's income, unless the possession of the land or capital is also justified.*

Explanation not Justification. — What has just been written suggests a further caution, which cannot be too strongly emphasized. This book is devoted mainly to an attempt to analyze existing economic arrangements, and to explain how economic forces operate in the industrial world, *as it is to-day, and based as it is on certain great social and legal institutions, such as private property, contract,* etc.

Now the mind has a vicious habit of confusing explanation with justification. Having explained, too easily we allow ourselves to think that we have thereby justified. But explanation and justification are really quite different and distinct things. Thus, in the chapters to follow, we must never lose sight of the fact that we are merely explaining or trying to explain rent, interest, wages, and profits. Their justification or condemnation, while it should properly be based on a correct explanation, must also be based on a

multitude of economic, ethical, political, and other considerations. In this book we can afford hardly more than a bare reference to some of the most important of such considerations.

SUMMARY

1. Distribution is that part of economics which deals with the division of the social income, especially among those representing the different factors of production.
2. Our modern system of distribution depends directly upon our institution of private property. It is therefore along the lines of changes in private property that improvement of distribution is, in part, likely to come.
3. Private income is the individual's share of the social income. Real income consists of commodities and services which the individual has for his consumption. Money income is the money received by an individual during any period of time.
4. Explanation of income shares is not justification of income shares.

QUESTIONS FOR RECITATION

1. What is distribution? What problems does it seek to solve?
2. What is the relation of private property to distribution? How is this illustrated in the case of land? In the case of capital?
3. If a physician's practice is worth $10,000 a year, what is his money income? Mention some of the things that probably go to make up his real income.
4. What other persons are likely to enjoy a part of this income?
5. Distinguish between explanation and justification of the actual distribution.

QUESTIONS FOR STUDY AND DISCUSSION

1. Analyze the total annual product of industry to show the net social income for consumption.
2. Is all the net social income distributed?
3. How do children receive their income? Paupers? Semi-paupers? Prisoners? Professional thieves?

LITERATURE

Ely, R. T.: *Property and Contract in their Relation to the Distribution of Wealth*, 2 vols., especially Vol. I, Pt. I, Chs. I–III.
Mill, J. S.: *Political Economy*, Bk. II, Ch. II, §§ 1, 2, and 3.

CHAPTER II

RENT

As in the study of the factors or agents of production we first discussed the factor land, so here in our study of the distribution of the social income among the factors that contribute to its production, we may logically begin with a discussion of the return to the first factor.

Meaning of the Term. — As used by economists, the word "rent" means that which is paid for the use of land or other natural agents. The popular meaning of the word "rent" is less exact. In everyday life we hear people use the word to describe that which is paid for the use of a house or other building. But such so-called rent contains two elements, one of which is not economic rent at all. The amount paid for the use of a house includes the amount paid for the use of the land upon which the house stands, which is economic rent; but it also includes payment for the investment of capital in the form of a building, and this latter return is therefore not rent, but interest. The reason for the popular confusion lies in the fact that both are usually paid to the same person. In some cities, however, separate ownership of lot and building is not uncommon. One man may own the building site and lease it for a long term of years to another man who erects a building upon it. In such a case the building becomes the property of the landowner at the expiration of the lease, unless the lease is renewed. In other cases the separation in ownership is permanent, the house-owner paying an annual sum to the landowner for the use

of the ground. This is the case, for example, in Baltimore, where ground rents are an important feature in the economic life of the city, and also in some northern cities of England, and in Scotland, where "feus," a form of perpetual ground rent, are a familiar institution. Let us remember, then, that in economic discussions, the word "*rent*" *means only that which is paid for the use of land or other natural agents.* Inasmuch as land is the chief natural agent appropriated by man to his uses, it is common to speak of land as if it were the only natural agent for which rent is paid. It is therefore necessary to caution the student at this point that when the word "land" is used in the following pages, it will almost always be possible to substitute for it the more general term. In other words, the same forces which determine the rent of land determine in the main the rent of other natural agents.

1. *The Quality of the Land.* — The first thing to be noted about land is its *quality.* Differences of fertility of agricultural land are known to every observer. They depend upon what one of the early economists described as the "natural and indestructible properties of the soil." In recent years many writers have objected to this statement. It has been said in denial that soil is not "indestructible"; that it may be and often is exhausted; that it can be removed from the land altogether, and that on the other hand it can be created by fertilization, etc. The disagreement which these writers express is due in large part to their use of the word "soil" in its narrow sense. If we use the word "soil" only to distinguish the thin top layer of the land that contains certain chemical elements necessary to plant life, then some of the objections just stated are valid ones. Such "soil," as distinguished from subsoil and the ground lying underneath, may indeed be carted on or off the land at pleasure and may be wasted or replenished. But

even granting this, there still remain certain qualities of the land that are practically or entirely indestructible and unproducible, and which affect the productiveness of the land so directly that we may without impropriety speak of them as "properties of the soil." Such a property is the conformation of the land. A steep gravelly hillside does not equal a plain in fertility, nor is the north side of a mountain as productive as the south side, other things being equal. Again, climate, although strictly speaking not a "property of the soil," is an inseparable condition of the land, upon which to a very great degree the productiveness of the land depends. It would be better to speak of these forces governing the quality of the land as *the inseparable conditions affecting its productiveness*. Of these, extent (standing room), conformation, and climate are essentially natural and indestructible.

As we have just seen, under the "original and indestructible qualities of the soil," or, to use the phrase suggested, the inseparable conditions affecting production, we must include the general physical environment, and this means much more than many modern critics have recognized. Concrete instances will aid us in appreciating the significance of this environment. In the western part of New York State, along the shores of Lake Erie, we find a region which is admirably adapted to the production of table grapes. This is due in part to the properties of the soil itself, but more particularly is it due to the presence of Lake Erie, which, by absorbing the heat in the springtime, delays the appearance of vegetation, and by giving off heat in the fall retards the action of the frost, thus giving the grapes time to ripen. If we go to Palisade in the western part of Colorado, we find a region so admirably adapted to the production of peaches that some of the land was several years ago valued

at $1000 per acre. This is due, not merely to the properties of the soil, but also to the peculiar location of the region, which is of such a character that the breezes keep off the frost. Land thirty miles to the west, which is apparently similar in quality, will not produce peaches and is far less valuable. Careful consideration of actual agricultural conditions leads to the conclusion that, while man can do much to create fertility, it is a serious error not to attach great significance to the inseparable conditions affecting the productivity of the soil. Parallels to the American examples quoted could be found in different districts of England specially suited for the raising of particular crops or plants, or noted for the rearing of certain breeds of sheep or cattle; and on any single farm the farmer will tell you that some land is good and that other land is bad, whatever may be done to deteriorate the one or to improve the other by niggardly or unskillful, or by generous and careful, cultivation, or by withholding or applying appropriate fertilizers.

While it is true that the soil can be removed and that fertility can be increased or diminished, and consequently is not indestructible in a physical sense, we may speak even of fertility as economically perpetual, just as one modern economist has called " capital value " perpetual. While the land yields an annual return, its fertility may be maintained and even increased by wise husbandry. It is only, then, by a wasteful and prodigal agriculture that the original gifts of nature in the fertility of the soil are exhausted. Similarly the value of the capital invested in a manufacturing plant is maintained under wise management, though the concrete capital forms are undergoing constant destruction. But, as it is easier to retain the fertility of the soil in perpetuity and to increase it than it is to maintain and increase the value of capital, land has in this particular a superiority.

Fertility, even when artificial, becomes essentially a part of the land. The farmer, when he invests his capital in fertilizers, makes a contribution which becomes indistinguishable from the soil itself. From such a case, where capital is embodied in the land and assimilated to it, we pass by insensible gradations to fences, barns, houses, etc., which more and more retain their distinct character as capital that can be removed and can also be reproduced. Where, then, is the line between land and capital to be drawn? We might, to be sure, restrict the term "land" to strictly natural land, and apply the term "capital" to all *products*, including even the soils of old lands which have been kept productive by fertilization. But this distinction, while perhaps logical, would for practical purposes be confusing. On the other hand, if we include under land all capital that has been insensibly incorporated in it, we must acknowledge that there is no hard and fast line of division between land and capital. Here again we are reminded that in economics, as in daily life, distinctions are governed by convenience, and are good or bad according as they are more or less useful.

The distinctions between land and capital are now undergoing discussion and may be regarded as debatable ground in economics. We cannot enter into the controversy in this place or give all the reasons why it seems to us that the differences between land and capital are fundamental in their theoretical and practical significance.

2. *The Situation of the Land.* — The second great fact to be noted about land is its *situation*. On one side this is closely connected with climate. Thus, the significance of situation near a large body of water or near a mountain range has already been pointed out. But the situation of land with regard to the consumers of products is of even greater significance. Other things equal, land a hundred miles from mar-

ket is more valuable than land a thousand miles from market. This difference is really one of communication and transportation, and therefore, of accessibility, which depends mainly upon distance. But land may be far away, yet easy to reach, or near, yet difficult of access. Changes in the cost of transportation therefore affect rents profoundly. Thus, the agricultural rents of England were revolutionized during the last century by cheap ocean transportation, by which distant lands were brought very near to her shores.

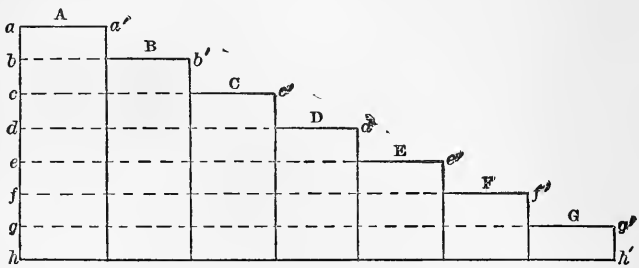
To this fact of situation we must ascribe almost wholly the enormous rents paid for city lots, as contrasted with the rents paid for lots in suburban places or in small towns. Here, too, rapid and easy transport powerfully affects rents. Good means of rapid transit increase the value of suburban lots and check the rise of rents for residential sites in the cities themselves.

And now, having noticed that all the minor economic differences in land resolve themselves into differences of *quality* or of *situation*, we may go one step farther and reduce these two differences, for the purpose of convenience, to one, viz., *desirability*. Suppose, for instance, that a man in New York City owns two farms, one in the state of Dakota, the other in his own state. If the Dakota farm produces thirty bushels of wheat to the acre, and it costs the price of ten bushels per acre to get the crop to market, while the New York farm raises twenty-two bushels per acre and it costs two bushels per acre to get the crop to market, the farms are equally productive as far as the owner is concerned. Other conditions being the same, the two pieces of land are equally desirable. In short, we may say that they are equally *good* land. Whenever we speak of good land, therefore, in connection with the subject of rent, we mean land which for all reasons taken together is desirable. It

will be absolutely necessary to keep this in mind in studying the following pages.

Rent of Agricultural Land

To-day there exist large areas of land in certain parts of the world which may be had for nothing. Of this land some is cultivated and yet pays no rent; and some is not cultivated at all. Why, then, is it that some land will bear rent under such circumstances? Obviously, because that land is more desirable than the land which may be had for nothing. Let us illustrate this by a diagram.



Suppose the above to represent all land, arranged in seven groups according to quality, each small parallelogram representing 2 dollars' worth of product based on its value at the farm. Then the first group will produce 14 dollars' worth of product as the result of a given outlay of labor and capital; the second, 12; the others, 10, 8, 6, 4, and 2, respectively. Now, if the people are few in number and need a small part of the land alone, they may cultivate only A, or the most desirable land. As long as there is enough of this land, if it is of equal desirability, there will be no rent, for no man will pay rent for what he can obtain for nothing.

But the time may come, with increasing population, when more land is needed, and cultivation is driven down to B. Land is still free there, but all the land of group A has now been appropriated. If, then, any man insists upon cultivating land which belongs to an owner in group A, he must pay for the privilege. How much must he pay? Ricardo would say 2 dollars for the amount of land used to produce the 14 dollars' worth of products, and, assuming, as Ricardo did, the cultivators to be of equal degree of efficiency, the rent would be 2 dollars, since in group A they can produce 14 dollars' worth of product with a given outlay of labor and capital, while in group B they can produce only 12 dollars' worth. The land in B, which is free land, is now situated on what may be called the extensive margin of cultivation; that is, the grade of land which will just pay for cultivation and no more. The normal reward of labor and capital in agriculture is the total return to farming on this margin. The surplus product from the superior land — in other words, the advantage which owners of land in A have over the tillers of the free land — is rent. And it is rent whether the owners of the land in A work the land themselves or lease it out to others.

If population increases still further, without any improvements in the arts of production or of consumption, the margin of cultivation will in time descend to land in group C, where the value produced by a given amount of labor and capital is less than that produced before. Land in B will now return a rent of 2 dollars, while land in group A will yield a rent of 4 dollars. If the margin of cultivation is forced down later to E, then rents on land in B will equal one-half, and on land in A will equal four-sevenths, of the entire product of such land.

Intensive Cultivation. — We have now considered rent

from the point of view of the extensive margin of cultivation. This is the traditional treatment of the subject of rent which has been most emphasized by economists in the past. They have, however, not neglected to treat rent from the point of view of the intensive margin, which we shall now consider.

With the figure in mind, let us place ourselves again at the point where all the A land is taken up and the men are beginning to seek new means of production. We have assumed that they will take up new land in group B. This is not the only possibility, however. It is probable that land in A may be made to produce more than it has yielded before, if the amount of labor and capital expended upon it is increased. In other words, it will be possible to cultivate the old land more intensively at a profit. Suppose that ten men formerly cultivated 100 acres of A land, raising 1400 dollars' worth of product, and that now eleven men put their labor upon the 100 acres. It may be that the 100 acres will now produce 1530 dollars, in which case it is evident that the labor of the eleventh man has made a difference of 130 dollars. The 1400 dollars' worth of product raised by the ten men meant 140 dollars per man. In accordance with the law of diminishing returns, the eleventh man does not increase the output proportionately, but he is still producing 10 dollars more than he would if he were to work on the B land, where by our assumption ten men could produce only 1200 dollars' worth of products. The owner will give such a laborer only what he could get elsewhere, on the B land, which would be 120 dollars. The difference between the 120 dollars and the 130 dollars the owner of the superior land takes for himself. Encouraged by this, the owner thinks of hiring a twelfth man, but concludes that he would thus secure a crop of only 1640 bushels. Hence the twelfth man would increase the output

by only 110 dollars, while he would have to be paid 120 dollars, the amount that he could earn by working free land in group B. All new laborers, therefore, in excess of one for every ten of the earlier laborers, would find it more profitable to put their labor upon the free land. Hence, as the demand for agricultural produce increases relatively to the supply, new labor and capital are expended upon land already under cultivation as well as upon land not used before. The rent of such land is increased by the surplus yielded by every addition of labor and capital. In other words, there is a change in both the *intensive* and *extensive* margins of cultivation. With every increase in the price of produce, and with every fall in the extensive margin of cultivation, more labor may be employed profitably on land already cultivated. Thus the landowner, who in the case last supposed could not afford to employ a twelfth laborer, may be able to employ thirteen or even more when the extensive margin of cultivation has fallen to group C or D. From the foregoing illustration it is clear that the theory of rent is based upon that law of diminishing returns which has already been explained in a previous chapter. It is evident that, *barring improvements in the arts of production or consumption*, each addition to the number of mouths which must be filled, at least beyond a limited number, makes the task of drawing sustenance from the earth more difficult. But we know that improvements have hitherto kept pace with increasing population, or have outstripped its growth, to use the more correct description.

The intensive margin is reached in the case of all land when the last application of labor and capital produces no surplus. What is called the extensive margin means land which just pays for cultivation and yields no surplus beyond the remuneration of labor and capital. When we treat the rent

of land from the point of view of the intensive margin, we have one uniform method which applies to all land.

Rent of Urban Land

The fact that situation is the factor of special importance in determining the desirability of urban land leads to certain results of a peculiar nature that call for separate discussion. We may consider first of all land used for residential purposes. Cities have quarters which natural beauty, healthfulness, convenience, and in an especial measure fashion have rendered particularly desirable. In proportion to demand the supply is sharply limited, and this circumstance causes a keen competition. The height to which this competition will carry rents will depend upon the number possessing large amounts of wealth, and upon their readiness to spend their money on what they regard as desirable sites for homes, and fashion has perhaps in towns more influence on such intensity of desire than any other force. Similar considerations will affect the height to which the rent of business sites will rise. *The higher the average of well-being and the more willing people are to spend their money, the greater will be such rents.* Fashion enters here, too, particularly in the retail trade. If people spend money readily, they will pay appreciably more for an article in a convenient locality than for the same commodity in a situation slightly less convenient. This will often enable those whose business is in desirable locations to secure higher prices with a larger quantity of sales, or to increase still further the number of sales by keeping to the price asked by competitors situated less desirably. *Intensity of traffic* is an important consideration in determining the rent, and consequently the value, of retail business property. We must also take into

account the quality of the people who are responsible for this traffic, the rent depending both on numbers and on quality. In some cases a high degree of intensity may counterbalance a lack of fashion, or even more than counterbalance it, and retail business property in a neighborhood which is not fashionable may, in consequence of the intensity of traffic, have a higher rent than similar property in a fashionable locality where the traffic is comparatively small. The influence of fashion, however, can be seen in a very marked manner in a city like New York, where large numbers of rich people would on no account make purchases in an "unfashionable" street. The result is a large surplus gain secured by business sites favorably located. Competition transfers to the landowners that surplus due to situation. This explains a fact which has puzzled many observers, namely, the high rents in American as contrasted with European cities. American cities are spacious, but other considerations besides space govern rents.

Reflection will show that where the two elements of a high degree of scarcity and desirability enter into the location of land on the seacoast or in inland health or pleasure resorts, similar causes will produce large rents. On the other hand, it is commonly a matter of little or no concern where the potatoes and beef we eat are produced, and the result is that agricultural rents are governed less noticeably by situation, the means and cost of transport being the chief consideration in this matter.

The Relation of Rent to Value of Product. — It is often said that rent has no influence on the value of the product, and that rent differs herein from wages and interest, which are said to "determine" price. This view at first sight seems to be paradoxical, as the tenant must pay rent to the landowner as well as interest to the capitalist and wages to his

laborers. The paradox is explained by saying that prices are fixed by the expenses of production on the poorest land where wages and interest are paid, but no rent is possible, or by the expenses of production where marginal capital is employed on the better grades of land. Hence the rent that is paid for the better land is the result, and not a cause, of the price fixed in this way.

This doctrine is true in the main, but it has its limitations. To the extent that land is "indestructible" and does not need any treatment to maintain its services to production, it is correct to say that rent does not enter into price. On the other hand, to the extent that labor and capital require a remuneration to keep them from perishing, wages and interest do clearly enter into price. But so far as regards the payments necessary to keep up the fertility of the land, and so far as regards the surplus above maintenance which labor and capital receive, the doctrine is not true.

The Relation of Rent to the Value of Land. — The value of land, however, is determined by its rent. *The value of the product determines rent, and rent in turn determines the value of the natural agent.* If any piece of land is so much more desirable than the poorest piece which is in cultivation that it will return a rent of five dollars per year, and if at the same time and place capital regularly commands 5 per cent interest, then the owners of the land and others will regard each acre as equal in value to an amount of capital that returns five dollars per year, or one hundred dollars. But anticipated future changes in the yield of land are also reflected in the prices at which land is sold. If it is generally expected that the yield of land will increase, its selling price will be high as compared with its present income; if it is anticipated that the income of a particular piece of land will fall, its selling price will be relatively low.

Hence we may say that the value of land is its rent capitalized.

Definitions of Rent. — We are now prepared to define rent more exactly and completely than was possible before, and to see that different definitions which may be given describe it in reality from different points of view. Thus the definition, " rent is that which is paid for the use of land or other natural agents," conveys no idea of the power by which it is secured nor of the way in which its amount is determined. In order that land of a given grade should have a rent paid for it, it must be both useful and scarce. The more useful grades of land are scarce, while the less useful grades are in excess of the demand for land and are no-rent lands. According to Ricardo, the author of the generally accepted theory of rent, *the amount of rent is determined by the extent to which the given natural agent or the given use of the agent surpasses in productiveness the poorest natural agent of the same sort or the least profitable use of such a natural agent that society requires to meet its demands for the product.* In all this it has been assumed that cultivators possess and display equal efficiency. That is, that a given piece of land will yield the same return per dollar's worth of labor and capital expended upon it, no matter which one of our 6,000,000 farmers operates the farm. Differences of product due not to differences in the natural agent, but to differences in the ability of those who use the natural agent, make it difficult to state accurately the *measure* of rent but leave unmodified the general statement of the *differential character of rent* as presented by Ricardo.

SUMMARY

1. Rent is the return paid for the use of a natural agent, and is equal to that part of the product of the natural agent which is in excess of the product of the poorest agent of the same

sort that is cultivated, assuming equal applications of labor and capital.

2. So long as land exists in excess of all demand, rent is determined by the excess of product over that of the poorest free land, assuming equal applications of labor and capital.
3. When all land is taken up, and all is cultivated that will repay cost, rent is determined by the excess of product over the necessities of laborers, — as determined by the law of wages, — and the necessary reward to the capital invested in cultivation.
4. Increased demand for the products of the soil regularly results in the cultivation of more land (extensive cultivation) and in the application of more labor and capital to that already in cultivation (intensive cultivation).
5. In a given stage of the arts of production a point is reached in the application of economic energy to any natural agent, beyond which the return to further applications of energy is proportionately less (the Law of Diminishing Returns).
6. Special importance attaches to situation in the determination of urban rents.
7. The value of any natural agent tends to be determined by its rent capitalized at the current rate of interest on free capital, but falling and rising land values modify this tendency.

QUESTIONS FOR RECITATION

1. On what is rent based? Why would rent disappear if land were unlimited in amount and all were of equal quality?
2. Discuss the differences in desirability of land.
3. How is the amount of rent determined when free land exists?
4. What is the extensive margin of cultivation? The intensive? What is intensive cultivation? What considerations determine how far intensive cultivation may profitably be carried? State the Law of Diminishing Returns. Show how it applies to land used for manufacturing. For commercial buildings. For city residences.
5. What effect does a lowering of the margin of cultivation have upon rent? Why?
6. What is the effect of improvements in the arts of production? Of consumption? Of transportation? What are the forces in society that tend to raise agricultural rents? Urban rents?
7. Does rent determine price? If so, why? If not, why not?
8. How is the value of any natural agent measured?

QUESTIONS FOR STUDY AND DISCUSSION

1. Discuss the different kinds of rents paid by farm tenants with which you are familiar and compare the advantages and disadvantages:
   (*a*) to the land owners;
   (*b*) to the tenants;
   (*c*) to society at large.
2. Under what circumstances is tenancy of land good, under what circumstances evil? If generally an evil, what would you do about it?
3. Supposing you are married, is it better for you to own your home or to pay rent? Would home ownership be preferable for you, even if more costly?
4. Do high rents raise the price of agricultural products?
5. Enumerate the advantages of private ownership of land. What are the disadvantages? Is it possible to increase the present social advantages and lessen the present disadvantages of landed property, while still retaining it?

LITERATURE

Clark, J. B.: *Distribution of Wealth*, Ch. XIII, pp. 188–193.
Commons, J. R.: *The Distribution of Wealth*, Ch. III, pp. 159–170.
George, Henry: *Progress and Poverty*, Bk. III, Ch. II (seven pages).
Hobson, J. A.: *The Economics of Distribution*, Ch. IV, §§ 1 and 2.
King, W. I.: *The Wealth and Income of the People of the United States*, Ch. VII, pp. 154–163.
Mill, J. S.: *Principles of Political Economy*, Bk. II, Ch. XII, §§ 2 and 3.
Patten, S. N.: *Dynamic Economics*, pp. 144–147.
Taylor, H. C.: "The Differential Rent of Farm Land," *Quarterly Journal of Economics*, August, 1903.
Walker, F. A.: *Land and its Rent.*

CHAPTER III

WAGES AND THE LABOR PROBLEM

I. How Wages are Determined

We have pointed out that of the factors of production, land and labor are the primary and original ones. Having discussed rent, or the portion of the product allotted to the owners of land, we may next properly consider wages, the portion allotted to labor. First of all, it is to be noted that in the study of wages there are really two distinct problems to be investigated. *What share of the total produce of industry goes to labor?* This is the problem of *general wages.* But having answered this question, we shall still have to ask ourselves *why some classes of workmen receive greater incomes than others;* why brick laying, for instance, is paid a higher rate of wages than is hod carrying, and so on. This second problem is called the problem of *relative wages.* We shall discuss the two problems separately as we have here stated them.

1. **General Wages.** — It follows from our discussion of the determination of value that if we imagine a purely hypothetical and practically impossible condition where wage-earners were in excess of all demand for their labor, such labor would have no value; wages would be nothing. On the other hand, if workers were few and in great demand, only the more intense wants for labor could be satisfied, and wages, or the value of labor, would be very high. It is evident, then, that wages, the value of labor, depend upon the rela-

tion between the supply of labor and the demand for it. But this statement is too general to be of great use. We must therefore consider further the forces that determine the supply and the demand.

The Number of Wage-earners. — We have already discussed the tendency of the human race to multiply. Beyond all doubt the desire for marriage and family is one of the strongest and most universal of human desires. But over against this desire stand many others, — desires for food, clothing, and a multitude of other things which are of course arranged and satisfied in order of their economic importance. No man intentionally satisfies weaker desires at the expense of stronger ones. In the whole list of desires, that for marriage must take its place according to its importance. The rank of this desire varies with individuals and classes. Some regard education, books, art, or even a substantial bank account as more important than marriage in their scale of desires. *The amount of necessaries, comforts, and luxuries which any person or class is accustomed to enjoy and to insist upon having, is the "standard of life," or the "standard of comfort," of that person or class.* This standard of life, though incapable of precise definition, is a very real and powerful force in the determination of wages. Whenever wages tend to fall below the point at which the workman can maintain his standard of life for a family, many workmen will do without the family, and will attempt to maintain the standard of life for themselves alone. Especially since women have become independent wage-earners, with a standard based on their own earning power, has this force come to operate upon both men and women to prevent or postpone marriage, and to diminish the number of children born. *The higher the standard of life, the greater is the persistence shown in maintaining it.* Those whose standard is very low are often heedless or hope-

less when that standard is threatened; while those who have attained a high standard display marked caution in delaying marriage until their income will justify such a course. It is plain, then, that the standard of life constantly limits the number of wage-earners, and hence tends to maintain or even to increase the value of labor. Notice, however, that it is not here claimed that the standard of life directly affects wages. Whether or how far the standard of living or of comfort can influence directly the wages of labor is quite a different question.

The Economy of High Wages. — In what has just been said we have simply noted the influence of the standard of life upon the number of workers in the labor market. But the result is equally striking when we come to consider the influence of the standard upon the efficiency of labor. Even from the point of view of employers as a class, the policy of depressing the workers' standard of life stands condemned. Labor, to attain its highest efficiency, must have character and intelligence as well as mere brawn. More and more, business men are coming to learn the "economy of high wages," and to recognize that "cheap labor is dear labor." American labor is in many industries the cheapest labor in the world because it is the best paid. High wages make possible a high standard of life. The high standard of life makes the labor intelligent, hopeful, and full of character, as well as more efficient physically. And the increased efficiency makes possible the higher wages. Thus by action and reaction the standard of life is both a cause and a result of the wages received.

The Demand for Labor. — In what has gone before, we have considered especially some of the forces that operate to control the *supply* of labor in the labor market. In other words, we have been considering the problem of wages chiefly

from the point of view of supply of labor. It remains for us to see how far we can explain wages from the point of view of demand. Manifestly, *under our present industrial system,* capital will not be saved nor businesses conducted unless those who save the capital and those who conduct the businesses receive a reward for their contribution to production. If workmen in seeking higher wages enforce demands which would rob the capitalist of the interest that is his due, or the entrepreneur of the profits that secure his services, then shortly the capital will cease to be saved and the unprofitable businesses will be discontinued. It is evident, therefore, that the demand for labor has an upper limit in the value to society of the product of labor. By unjust laws, by inequitable conditions, the employers may be able to secure labor for less than the workman contributes to the value of the product, but it is not easily conceivable that under present conditions of industry the labor can for long get more than it actually produces.

Summary of Theory of General Wages. — Summing up now what has been explained at length, we may say that *wages depend upon the relation between the supply of labor and the demand for it. The supply of labor,* and hence the lower limit of wages, *is fixed* to some degree *by the standard of life* of the workers. *But* as this force operates slowly, *it may* in extreme cases *happen that the* only *lower limit to wages is the amount which will enable the workers to live.* In earlier days some economists seemed to think that wages would normally and in the long run rest at this point of bare subsistence, and the law of wages which they formulated has therefore been called, on account of its rigidity and its harshness, the " iron law of wages." *On the side of demand,* we can only say that *there is an upper limit, fixed by the value of the worker's contribution to the product,* beyond which wages cannot nor-

mally go, since the demand for labor cannot be measured at a higher price than the price of what it produces. Consequently the demand for labor may result in giving to the worker in wages the whole of the product of industry after deducting rent and such minimum interest and profits as are fixed by laws to be explained later. *Between the lower limit, set by the standard of subsistence, or by the standard of life, and the upper limit, set by the value of the worker's contribution to product, wages will fluctuate according to the relative bargaining strength of the two parties to the wage contract.*

2. Relative Wages. — Coming now to the problem of relative wages, to the question why some classes of work are paid for at a higher rate than others, it is evident first of all that the pay of workmen in any class of employment depends upon the relation between the demand for such labor and the supply of such labor, and upon the relative bargaining strength of those in each group. Thus far the considerations already discussed bear upon relative wages as upon general wages. But in the discussion of relative wages, there are certain special considerations to be borne in mind. Differences in relative wages are settled in the great majority of cases by past conditions. To understand them we must go back to a man's father or grandfather. Occupations where remuneration is high are usually so difficult to enter that few are able to surmount the difficulties. Thus peculiar and rare qualities may be required, or an expensive training, which few parents are at once able and willing to give.

The poor are thus caught in a vicious circle. Their poverty results in crowding them into a restricted group of occupations. Their crowding into these occupations so increases the product in those fields that the product has a low value

as compared with the product of industries less crowded. The value of the product being thus reduced, wages are also kept down. And the low wages are in turn a cause of the lack of preparation of the following generation for a wide choice of employment. Thus poverty breeds poverty.

While the various sorts of labor are almost infinite in number, they are nevertheless susceptible of a fairly distinct classification. These classes have commonly been called "non-competing groups." Perhaps the best naming of these is that made by Professor Giddings as follows: *automatic manual, responsible manual, automatic mental, responsible mental.* Between any two groups very little competition is at any given time possible. What competition there is, is almost a matter of generations, resulting largely from the action of parents in preparing their children for entering one or the other of the groups.

Can society do anything to hasten the upward movement? Obviously it is against the selfish class interest of the higher groups to make easier the entrance into their groups. This, and even more importantly, ignorance and heedlessness, have resulted in social hostility or indifference to proposals for improvement. But in recent years, increased sympathy and knowledge have led to various hopeful movements of reform, such as improvements in the educational system, vocational guidance, and the like. The movement is likely to go much further as the various social and economic classes gain in knowledge, imagination, and sympathy.

The Influence of Public Schools. — A good system of public education continually increases the amount of freedom in the choice of occupations. Education gives greater knowledge regarding the advantages and requirements of different occupations at the same time that it puts its possessor in a position where he can more readily realize the one and meet

the other. It therefore tends to lessen the competition for the lowest grades of employment, thus raising the wages there; while it tends to lower the wages in the higher grades by making the competition for such employment more keen.

It is of course easy to exaggerate the influence of more "schooling" in preparing men for the various tasks of life. But, after all, it is very doubtful whether any other one agency of civilization has a greater influence than does the school in fitting the young of all classes for the industrial struggle that lies before them. This being so, it seems likely that society will move rapidly and far along this line in attempting to lessen such inequalities of economic situation among classes as are not proved to be due to differences of inherited natural capacity. What results might not be achieved to-day if society were to provide for compulsory, free, subsidized education of body and mind of all its sons and daughters up to the eighteenth year of their lives, such education being limited only by the ability of instructors and students to realize its possibilities!

Adam Smith enumerated the following five causes for differences of wages in different employments: first, their *agreeableness* or *disagreeableness;* second, the *ease* or *difficulty of learning them;* third, the *regularity of employment;* fourth, the *need of trustworthiness* in the workman; fifth, the *probability of success.* This summary of determining conditions assumes an unreal freedom of competition among workmen to secure the greatest net advantage from their employment. It nevertheless is suggestive and helpful in explaining actual differences in relative wages. It will be a good exercise for the student to apply to existing occupations Adam Smith's statement of the causes of differences of wages.

II. Labor Organizations

Wages have been shown to be largely dependent upon the relative bargaining strength of the workers as compared with that of entrepreneurs and others who contribute to the work of production. The same thing could be shown to be true also of the other conditions of employment which enter into the wage contract, such as working hours, intensity of work, etc. Such being the case, it is natural that under our modern wage system workmen have sought to increase their bargaining strength by every means in their power. One of the most evident means is that of uniting their strength in labor organizations. By such organization labor is enabled to substitute "collective bargaining" for the individual bargaining under which the workman is at a manifest and great disadvantage. *Labor organizations,* then, *are more or less permanent combinations of workmen formed to increase their power of determining the conditions of employment.*

Labor a Unique Commodity. — For many reasons it is unfortunate that labor must be regarded as a commodity at all. Generalizing is at once one of the greatest economies and one of the greatest dangers of the human mind. We could hardly think at all if we did not generalize; but our thinking often has very vicious practical consequences because of imperfect generalization. The mental process by which we include labor among commodities is a notable instance in point. Having generalized the idea of commodities to include labor, we forget the peculiarities of labor and make it the victim of practical conclusions that are false and vicious for that commodity, however true they may be for others.

Labor cannot be separated from the body and spirit of the laborer. Where his work is, there must he be, in conditions and circumstances that may exalt or debase him. Again,

labor unsold is lost forever. It cannot be held for a favoring market. Its sale is always a forced sale. The worker endures, but to-day's work, if unsold, cannot be sold to-morrow. It would require too great space to show all the other practical differences that mark labor off from other commodities. The two that have been explained will suffice to prove that we cannot use any " general principle " of " equal treatment " to justify the same laws for labor as for other commodities. " There is no greater inequality than the equal treatment of unequals."

Origin of Trade-unionism. — It is a debated question whether any trade-union grew directly out of one of the older gilds. In the eighteenth century, unionism seems to have started with the building and the tailoring trades, as the employers in such cases were small contractors against whom it was comparatively easy to combine. In the nineteenth century in England, the trade-union movement spread to the factories and the mines, and some of the strongest unions are made up of operatives in large factories, such as the textile mills; but in the United States unionism has not effectively spread to the unskilled and semi-skilled workers in factories. This leaves great bodies of workmen who have no chance to bargain on equal terms with their employers. If men cannot look forward themselves to becoming employers, they are bound in time to see that their interest lies in locking arms, that thereby they may secure the strength of unity, and by collective action restore some approximation to the old equality in skill and bargaining power that marked contracts between master and man in the simple industry of earlier centuries. Thus the organization of labor becomes socially and economically necessary and inevitable.

But we must not exaggerate the advantage of the employer when faced with a conflict with his employees. The

employer has often important contracts to fulfill and he may lose his all as a result of a strike, while the employees lose only wages for a short time. The extreme on this side is given when an employer is trembling on the verge of economic ruin, wiping out the savings of years; and on the other hand stands a thoughtless, improvident wage-earner who contemplates a period of idleness with satisfaction.

Three Forms of Organization. — Labor organizations may be divided into three classes, and as a matter of fact are so divided to-day in the United States and England. The trade-unions in the United States now allied in the American Federation of Labor, and the "old" trade-unions of England, are primarily unions of skilled artisans of distinct crafts. According to the old trade-union idea, each craft should be organized by itself. The Knights of Labor in the United States, at one time a powerful body, is an example of the second class. They aim to break down the barriers to common action found in differences of occupation. Within recent years in all industrial nations a still "newer" unionism has developed, on lines of industry rather than of craft or trade, of which the United Mine Workers and the Brewery Workers of America and the new industrial unions in England are notable examples. The three forms are usually distinguished by the names *trade-* or *craft-unionism, labor-unionism,* and *industrial-unionism.* In the United States the latest phase is represented especially in the two rival organizations known as the Chicago and the Detroit "wings" of The Industrial Workers of the World. The American Federation of Labor, moreover, which is based chiefly on craft-unionism, also includes a considerable number of powerful industrial unions.

Growth of Labor Organizations. — Estimates as to the numerical strength of labor organizations in the United States

vary considerably. The number, of course, varies from time to time. A period of prosperity for the organization is generally followed by one of reaction. Reaction has always ended in a new advance, and thus far in the United States each new advance has carried the labor organizations farther forward than ever before. The American Federation of Labor, at its thirty-fourth annual convention in 1915, reported a dues-paying membership of 1,946,347. Secretary Morrison of the Federation reported in the same year that "unaffiliated unions recognized by the Federation," including various railway "Brotherhoods," had a membership of 344,182. If to these figures be added those of the probable membership of the Knights of Labor, Industrial Workers, and other smaller bodies, the total number of members of labor organizations would probably rise to two and a half millions. Relative numbers of unionists are as great for other great industrial nations as for our own country. It was calculated in 1911 that there were over 11,000,000 unionists in twenty nations of the world.

Strikes. — Strikes are essential to collective bargaining, as they are nothing else but the refusal of employees to agree to the terms of the employers. But, like the *lockouts* which are used by the employers, they produce obvious harm, both strife and loss, and therefore every effort should be made to avoid them, if the result can be secured by other means. It is only as a last resort that they can be justified, or are justified by the unions themselves. Yet the power of such action as a lever of advantage is not to be despised. Observation based on American experience goes to show that more than one-half of all strikes are wholly or partly successful in enforcing the demands of the unions. Out of a total of 36,759 strikes reported to the United States Bureau of Labor from 1881 to 1905, 47.94 per cent were wholly success-

ful; 15.28 per cent partly successful; and 36.78 per cent failed. Even where strikes are apparently failures, they may accomplish much for the employees by inspiring sufficient fear of recurrence to bring about fairer treatment from unwilling and unjust employers.

Strikes are most likely to be successful when they are declared during a period of improving business; and hence strikes for higher wages are more often successful than those aimed to prevent a reduction. Indeed, it has been claimed that employers have in some cases secretly encouraged a strike when they have desired to close their works during a period of slack business, in order to drive a better bargain with the men when the strike should have proved unsuccessful.

Boycotts and Injunctions. — Another effective weapon in the hands of organized workmen is the "boycott," which means a concerted refusal of workingmen of many trades, or even many localities, to purchase commodities produced in a shop where a labor dispute is in progress. The refusal to patronize often extends to business enterprises where no labor dispute exists at the time, but which buy from a boycotted establishment; it is then called a "secondary boycott." The boycott is considered to be a more efficient means against the employer than even the strike. Of late, however, American trade-unions have used it less frequently than before as a result of the unfavorable attitude taken by the courts. The courts in America are a greater factor in deciding labor disputes than in any other country that has passed into the modern industrial stage. By issuing "writs of injunction" they often prohibit organized workingmen under the penalty of being punished for contempt of court, from performing collectively, acts in pursuit of a boycott or a strike, which, if done by an individual, would not have

constituted a breach of the law. English law grants much greater power to organized labor.

Employers' Associations. — One of the results of the growth of labor organizations has been the growth of employers' associations. Such associations have generally arisen for the purpose of counteracting the increased bargaining power which the workingmen have acquired through their organization. Frequently, however, after a more or less lengthy period of industrial strife, the employers' associations and the trade-unions have succeeded in arriving at agreements concerning wages, hours, and other working conditions. Such agreements, which are known as *trade agreements,* are generally valid during a period from one to three years.

The Influence of the Public. — A powerful influence against violence and needless strikes is the recent great growth in public knowledge and public interest in matters that concern labor. Public support of their cause is now an object of frequent appeal by labor organizations. The use of "Union Labels," placed upon goods made by union labor under conditions satisfactory to the organizations, is becoming increasingly frequent and effective.

The National Consumer's League represents a movement of the same sort from without the ranks of labor. This league, organized less than twenty years ago, is doing a quiet but effective work by granting the use of its "Consumers' League Label" to all manufacturers of certain classes of goods who satisfy the league that they are fulfilling prescribed conditions in the employment and treatment of labor. As yet the label is used only in a few classes of women's and children's clothing, but it is the intention of the league to carry its work much farther. The league has further accomplished a great work by initiating a country-wide movement for

"early shopping," to lessen the overburdening of retail clerks in holiday seasons.

The growing recognition by the public of its influence and responsibility in the matter of strikes and other phases of the labor problem is shown by the work of the United States Industrial Commission, which reported to Congress in 1900, and by the work of the Federal Industrial Relations Commission which reported in 1915 and 1916. Moreover, among various proposals for social action to lessen or prevent strikes, the one that meets with widest acceptance is that, in case of strikes, the public should be furnished with all the facts on both sides of the controversy.

The National Civic Federation, an association of citizens of national prominence, with subordinate state federations in many states, has done much to organize public opinion effectively for fair decisions and hence for influence in many industrial questions.

Incidental Benefits of Labor Organizations. — 1. *Promotion of Temperance.* — The drinking of liquor is not allowed at union meetings, and most of the unions advocate temperance, although the majority of their journals stand against prohibition. The Brotherhood of Railway Engineers, however, and some of the unions of highly skilled workmen are also in favor of prohibition.

2. *Educational Influence.* — It would be hard to overestimate the importance of the educational feature of labor organizations. The debates and discussions which the unions foster stimulate the intellect and do much to counteract the deadening effect of a widely extended division of labor. Moreover, they furnish opportunities for social culture to women as well as to men, and thus lessen the temptation to coarse indulgence and develop the finer side of their nature.

3. *Elevation of the Standard of Life.* — It is often objected that they seek by imposing hindrances on some of their members to raise the wages of the rest. What they are really trying to do is to raise the workman's standard of life, in order that progress may mean for them not merely an increase in the number of men employed, but rather a betterment of the quality of human life concerned in the occupation. It is objected again that the limitation of numbers in one trade can only result in overcrowding others, and that therefore, if all trades were successfully organized, the results in one part of the labor field would neutralize the results elsewhere, and nothing would be gained. But such an objection overlooks the significant fact that the union may check the imprudence that leads to overpopulation, and possibly maintain a just balance between the need of society for the labor and the need of the laborer for a complete human life.

4. Many of the trade-unions perform also the function of a benefit society. They provide relief in case of death, accident, sickness, unemployment, and in some cases even for old age. As a coöperative insurance company the trade-union is able to attain a high degree of efficiency, as the members, being bound by reciprocal ties of solidarity, forbear to practice against the common insurance fund those small frauds which constitute such a grave problem in the administration of industrial insurance either by the state or by a private company. In Great Britain, the trade-union insurance fund forms an important element in the recently enacted system of social insurance.

Weaknesses of Labor Organizations. — Some of the weaknesses of labor organizations have already been touched upon. These and other weaknesses, may be briefly summarized as follows: —

1. *Limitation of their Benefits.* — They have often, particularly in their early history, sought to gain benefits by a selfish and exclusive policy toward other laborers. In some cases, they have been able to build up an evil labor monopoly. It must be admitted, on the other hand, that there is sometimes, even in these days, valid excuse for limiting numbers. Unscrupulous employers have at times sought to increase unduly the number in a single occupation in order to have a reserve force of unemployed from which to draw in case of need and thus to keep down wages.

2. *Restrictive Policies.* — As a whole, the trade-unions have been too inclined to oppose improved methods and processes, and have adopted various policies as a defense against them. One cannot fail to sympathize with their objections to the introduction of improvements of machinery and organization if this introduction be made without consideration for the worker's welfare and be injurious to him, if only for the time being. Even if improvements of this kind do benefit wage-earners in the long run, it must be remembered, that, as has been said, the individual life is only a short run, and every means should be used to reduce to a minimum the suffering of the individual due to social progress as a whole. Also, the workers are warranted in their opposition to the inhuman speeding-up processes introduced by certain employers. On the other hand, some of their policies unnecessarily hamper the employer; for example, the undue limitation of output and of the number of apprentices. In opposing mechanical improvements, not because they were detrimental to the health of the workman, but because he had no share in the profits, their policy has sometimes been shortsighted. They have failed to recognize clearly that the satisfaction of the increasing wants of the masses depends largely upon increasing production and efficiency; that the greater out-

put due to improvement is directly beneficial to the workman himself, as representative of the masses. Necessarily, the unions devote themselves mainly to policies which fall within the general field of distribution (working conditions, wages, etc.), and in this field they have been successful, but their policies must be judged with reference to production as well. In many parts of the world vast numbers of human beings still do not have enough to eat, and a very little added to average incomes means a very large increase in production.

That it is not impossible to strike a satisfactory balance between the interests of the workers and industrial improvement is shown by the case of the printing industry, where the union accepted the introduction of the linotype upon the condition that only skilled printers should be charged with its operation.

3. *Narrow and Shortsighted Views.* — It has been one of the weaknesses of labor organizations in general that they have not been sufficiently interested in public measures and reforms designed to benefit society. For example, they have given too little attention to sanitary matters and too little support to public health authorities in efforts to benefit the poorer classes. They have underestimated the importance of purity in politics and a highly trained civil service. At times they have favored measures which were bound to be ultimately injurious to them, simply because such measures would increase temporarily the supply of work.

4. *Lack of Flexibility.* — Labor organizations have shown another weakness which is common to all great political and social organizations. Here red tape is necessary. General rules must for the most part govern, and individual interest must often be sacrificed or injured in seeking the welfare of the whole.

III. Methods of Wage Payment

Labor organizations strive to secure higher wages and better conditions of employment for workingmen than they would otherwise obtain, and thus to increase their share of the product of industry. But both by private employers and by economists other methods of wage payment have been considered besides the usual system of time wages, where the laborer is paid a fixed sum for each unit of time employed. Some of these methods call for discussion.

1. *Piecework Wages.* — Under this system, the laborer is paid by the unit of product, instead of by the unit of time. The system of piece wages can only have a fair trial in industries which allow considerable division of labor among occupations that are of a routine nature. Thus compositors in a printing office may be paid by the thousand ems of type set. Payment by the piece, where possible, has certain evident advantages both for laborer and employer, and has met with favor among certain trade-unions. But in some industries abuses of the system have been so many and so flagrant as to arouse active opposition. It has at times been used by unscrupulous employers to break down regulations and even laws limiting the hours of work, and more frequently still to bring about a reduction of wages. Thus, after the workers have attained a high rate of speed by straining every nerve and muscle to earn high wages, the price per piece is " nibbled " in such a way that the workmen can earn by their increased exertion little if any more than they were earning before the piecework system was introduced.

2. *The Sliding Scale.* — The system known as the " sliding scale," by which wages are made to depend upon the price of the product, has been adopted frequently among iron and steel workers and coal miners in the United States and

England. In recent years complaints have been made that employers under this system do not always truthfully declare the price of product, or their sales, and other difficulties have appeared which cannot well be explained here.

3. *Profit Sharing.* — Under a system of profit sharing the workmen in any factory, or at least a part of them, are allowed to share in the profits of the concern. A stated wage is paid, and then, at regular intervals, a part of the profits of the business is divided among the employees. There are many differences of detail which do not concern us here. Advocates of the system point out that it (*a*) *promotes economical use of material and machinery* by employees, (*b*) generally *increases their zeal and efficiency*, and hence results in (*c*) a *larger total product* and a (*d*) *larger income for the wage-receivers.* Its weakness is that it is not expedient to make the workmen bear the losses as well as participate in the gains, while the system without such a provision is likely to come to grief. Profit sharing has sometimes been extended to include *capital sharing;* that is, part ownership of the capital by the workmen, with some participation in the management. In recent years, profit sharing has been taken up with renewed interest and enthusiasm after an interval in which earlier hopes had given way to discouragement.

4. *The Task and Bonus System.* — In the opinion of its advocates "Scientific Management," an American thought-product of our own day, promises a conservative revolution in industry. Its claims are such as to challenge the study and fair consideration of every one who "loves his fellow man." Unfortunately we cannot discuss or even explain the system here. It must suffice to note these salient features. Scientific Management, as its name implies, proposes to apply to the management of industry the method of science, — wide and minute observation, analy-

sis, classification and organization, etc. Every industry as a whole, and every process within every industry, is to be analyzed into its simplest parts. Every unnecessary movement or process is to be eliminated. Coördination of processes and parts and functions is to be perfected, to secure maximum economy of effort. The thinking and planning are to be done entirely by specialized and expert thinkers and planners. The worker on any machine or hand work is to be freed from all need of planning. For his task day by day, determined by scientific principles, a standard wage is to be determined, also on scientific principles. If the worker does the work in the time assigned, he is to receive the bonus, which raises his time rate very considerably above the usual time rate of the industry. This " task and bonus " system is in general regarded as a part of the system of scientific management. The entire system, including the wage feature, is suspected or decried by leaders of the working classes, for reasons which we cannot here discuss. But we must repeat that the potentialities of the system, for good and for harm, are such that every public-minded student should give the whole matter careful consideration.

5. *Coöperation.* — If industry, as ordinarily organized in our great mercantile and manufacturing establishments, may be likened to a form of *despotism*, an establishment in which workmen are permitted to participate in capital ownership and management, under the chief control of one who is recognized as an industrial superior, may in the same way be likened to a *constitutional monarchy*. And finally, as opposed both to industrial despotism and to industrial monarchy, we have the third form, *industrial democracy*. Industrial democracy means self-rule, self-control, self-direction, by the workmen in their efforts to gain a livelihood. This is achieved in pure coöperation.

Under this system the workmen combine their own capital, purchase their own plant, and manage their own industrial affairs, in their own way, at their own risk, sharing profit or loss as the case may be. At least this is the method of *productive coöperation. Distributive coöperation*, on the other hand, is a system of coöperation in wholesale or retail trading. Distribution is here used not in the sense in which it is ordinarily used in economics, but in the sense in which we speak of the merchant's business as distributive.

In distributive coöperation, which has been more widely successful than other forms, the consumers of finished goods combine to purchase what they need, and thus save middlemen's profits. They form a regular stock company, subscribe for shares, employ a manager and clerks, — who often do not even share in profits, — and start a business. Profits are sometimes divided only on the shares, but the approved way is to pay a moderate interest on the capital and then divide profits between the two classes of stockholders and customers. In such cases the customers share in proportion to their purchases, the division being made at stated intervals.

In England and Scotland distributive coöperation has met with very great success. Productive coöperation, on the other hand, has disappointed the expectations of its earlier advocates. France seems to have had better success than England in productive coöperation. In the United States some instances of success are recorded, and many more undertakings of the sort have been partly successful. In England and Scotland Wholesale Societies have been formed for distributive coöperation, thus furnishing at the same time a steady market for some important productive coöperative concerns which they have organized.

The Strength and Weakness of Coöperation. — Producers' coöperation (1) *prevents strikes* by completely identifying the interests of labor and capital. It (2) *stimulates energy* and (3) *promotes economy and thrift*, since self-interest, which usually animates only the employer, here animates all the coöperators. No slighting of work can be tolerated and, eye service vanishing, (4) much labor of *supervision is saved.* Best of all, there is (5) constant *education of the coöperators* in discipline and business detail.

On the other hand, to speak of the weaknesses of the system, (1) *divided counsels* often render the movement of such a business clumsy and slow. Action cannot be so quick and decisive as when one man acts on his own responsibility. (2) It has been hard for workmen to recognize the necessity of securing *expert talent* for the work of supervision and organization. Failure has often been due (3) to *moral defects* on the part of the workmen. (4) Where success has attended the first steps of such a movement, the very *prosperity has sometimes produced dissension and disintegration.* These weaknesses, in less degree, have appeared in consumers' coöperation. (5) Where success has been permanent, there has been a *tendency to change from coöperation to "joint stockism."*

Arbitration and Conciliation. — We cannot dismiss this subject of the relation of the laborer to the product of his labor without a few words regarding the part that *arbitration* and *conciliation* have played and are to-day playing in the strife of interests by which the social income is portioned out. Conciliation is a term applied to the *regular efforts made by representatives of employer and employed or by a third person to prevent differences from arising, to heal such differences before matters reach an acute state, or, in the event of a strike, to secure a settlement without the intervention or adjudication of*

outsiders. Arbitration, on the other hand, means an attempt to adjust matters by the judgment of those outside the dispute, and usually only after acute trouble has arisen. As is evident, conciliation is preferable, wherever and whenever it is possible.

Both conciliation and arbitration have accomplished much for the preservation of industrial peace wherever thoroughly and honestly tried. Sometimes boards are appointed by employers and employed, and sometimes such boards are appointed by public authority.

Until near the close of the nineteenth century, arbitration, even when public authorities provided boards, had always been voluntary. That is, the findings of arbitration boards were legally binding upon neither employers nor employees, and therefore gained their strength from the awakening of the public interest and the enlightening of the public mind as to the merits of the dispute. Indeed, it came to be a settled conclusion in the minds of economists and others that compulsory arbitration could not be successfully attempted by government. But for about twenty years now compulsory conciliation and arbitration have been given a trial on a considerable scale in New Zealand and Australia, the successors of the United States as laboratories of social experiment.

Opinions, even of the most fair-minded and painstaking investigators, differ as to the success of the experiment. For several years the experiment was rather disparaged than opposed, when it was not enthusiastically praised. Unprejudiced observers generally agree that the plan on the whole has worked well, but many of them express distrust of the long-time result, and also point out that results in Australasia, even if satisfactory, would not be conclusive for the greater industrial nations. In recent years, adverse criticism has gone to greater, sometimes to extreme, lengths, especially in

the writings of a few American critics. On the other hand, there are still many who maintain stoutly that Australasia has really discovered a helpful method of promoting industrial peace. But it can never be more than one among many methods of dealing with this problem. Thoughtful people in New Zealand often say that one of the merits of compulsory arbitration, with all its weaknesses and failures, is that it recognizes the public interest in industry, because it is based on the hypothesis that society at large, as well as employers and employees, has an interest in the continuous operation of the industries; and they hope for still greater improvements in adjusting industrial disputes. The question may be regarded as still open.

Labor and Factory Legislation and Inspection. — Labor and factory legislation and inspection also need a few words of comment in this connection, although the subject has been more fully treated in the chapters on the Industrial Stage in England and in the United States. Labor laws, honestly conceived and properly enforced, have been productive of incalculable good. Federal and uniform state legislation should be designed to keep children away from regular factory work and in the school; it should restrict to the utmost the employment of women; it should limit the hours of employment for different classes of workpeople, particularly for women, young persons, and children, to the length of day prescribed by medical experience, and should secure regular and convenient hours of leisure, such as are afforded by a Saturday half holiday; it should compel employers to fence in dangerous machinery and otherwise guard against preventable accident; by *compulsory insurance* or *workmen's compensation acts* it should render employers pecuniarily responsible for accidents to employees; it should minimize unemployment and casual employment; it should provide

for sickness insurance and for old-age pensions. No country has ever suffered in international competition by approximation to the goal here described. Germany, which has done more than any other of the leading nations along these lines, has also made the most rapid industrial advance.

SUMMARY

1. General wages are determined by bargaining, between limits fixed on the one side by the product of the labor, and on the other by the cost of subsistence, as modified by the standard of living. The precise wage is determined by the relative strength of the two sides to the bargain.
2. Differences in relative wages are due to special conditions affecting different employments.
3. Labor organizations, a natural development of modern industry, have improved the status of labor.
4. Against labor-unions it is charged that they are often short-sighted and ultra-conservative, and are forgetful of broad social interests.
5. Piecework wages, the sliding scale, profit sharing, the task and bonus system, are various methods of wage payment that have been tried in recent times.
6. Arbitration and conciliation are playing an increasing part in the settlement of labor disputes.
7. Society, through legislation and otherwise, can do and should do much more than it has yet done in improving the condition of the "working classes."

QUESTIONS FOR RECITATION

1. In what ways does the standard of living affect general wages? Relative wages?
2. Name the circumstances producing differences in relative wages. What is the "Iron Law of Wages"?
3. Name the different "noncompeting" groups of laborers. Classify some well-known occupations according to this grouping.
4. What three types of labor organization are there? Discuss the change in the public attitude toward unions.
5. What are strikes? What are their chances of success?
6. Discuss the different systems of wage payment; their advantages and disadvantages, and their success.

7. Distinguish between arbitration and conciliation. What is the present status of the question of compulsory arbitration?
8. What are some of the objects that should be obtained through labor legislation?

QUESTIONS FOR STUDY AND DISCUSSION

1. Is an explanation of why ditch diggers get low wages a justification of the social and economic conditions that explain the low wages?
2. What would be the earnings of lawyers or physicians if all men and women had equal opportunity to develop knowledge and skill in those professions? Is an hour's work of a physician "naturally" more valuable than an hour's work of a ditch digger, or is the difference in value due to the difference in the supply of the two sorts of service? Why the difference in supply?
3. What is the economic effect of industrial education? Will it change the relative supply of skilled as compared with unskilled labor? Will it change the relation as between manual work and professional services?
4. How has Germany's social legislation increased Germany's industrial efficiency? Is there any stronger reason for social legislation than the reason that it "pays"? What is the goal of social economic life?
5. How many states have passed compulsory insurance or workmen's compensation acts? What is the date of the passage of the first one in the United States?
6. How much does the United States pay annually in war pensions? Who receive the pensions? What would old-age pensions on the English scale cost in this country? How far would the recipients be the same as those now receiving war pensions?
7. Compare the merits of compulsory investigation and compulsory arbitration in labor disputes.
8. Ought unions to be required by law to incorporate?
9. What is a boycott? a black list? What is sweating? parasitic industry?

LITERATURE

The literature of labor in the United States is so voluminous that any brief selection is unusually difficult and embarrassing. The attempt is made here to give at least one good title for each important topic.

Adams and Sumner: *Labor Problems.*
Ashley, W. J.: *The Adjustment of Wages.* (Excellent reference for joint agreements, the sliding scale, and the tendency of employers and employees to organization.)
Carleton, F. T.: *History and Problems of Organized Labor.*
Clark, L. D.: *The Law of the Employment of Labor.*
Commons and Andrews: *Principles of Labor Legislation.*
Ely, R. T.: *Studies in the Evolution of Industrial Society,* Bk. II, Ch. X.
Fay, C. F.: *Coöperation at Home and Abroad.*
Gilman, N. P.: *Profit-sharing.*
Groat, G. G.: *An Introduction to the Study of Organized Labor in America.*
Hoxie, R. J.: *Scientific Management and Labor.*
Le Rossignol, J. E.: *State Socialism in New Zealand.*
Lowell, Josephine Shaw: *Industrial Arbitration and Conciliation.*
Moore, H. L.: *Laws of Wages.*
Nearing, Scott: *Wages in the United States.*
Reeves, W. P.: *State Experiments in Australia and New Zealand.*
Report of the Industrial Commission (*U. S.*), 1900–1901; also *Reports of the Federal Industrial Relations Commission,* 1915–1916.
Schloss, D. F.: *Methods of Industrial Remuneration.*
Schoenhof, J.: *The Economy of High Wages.*
Siegfried, André: *Democracy in New Zealand.*
Smith, Adam: *Wealth of Nations,* Bk. I, Ch. I.
Stimson, F. J.: *Handbook to the Labor Law of the United States.*
Taylor, F. W.: *Principles of Scientific Management.*
Webb, Sidney and Beatrice: *The Case for the Factory Acts. Industrial Democracy,* Pt. II, Ch. I, pp. 49–50; and *A History of Trade-unionism.*

CHAPTER IV

INTEREST

After our long excursion into the subject of labor and its reward, it may be well for us to pause a moment and place in the right connection what is to follow. It should be recalled that under the general subject of distribution, or the division of the social income among the factors that have worked to produce it, we have now discussed the subject of rent, the share received by the owners of land, and wages, the share received by labor. We come now in regular order to a discussion of the share apportioned to the owners of capital. Land and labor, in their broadest sense, are the only original elements in production. Of course, as has been explained, land includes not only building lots and farming land, but also mines and rivers and fisheries, and, in short, all natural and unproduced agencies of production other than labor. Capital, on the other hand, is not a primary or original factor, but a secondary or derived one.

Unlike land, capital is produced, but it is produced for the purpose of further production. In fact, we may define capital as the *produced instruments of production.*

How Interest is Determined. — Interest is the return to capital. By what law is its amount determined? This question has been continually discussed and still appears to many economists an unsettled problem. The ancients in general denied that interest rested on any justifiable foundation. Aristotle thought it unjust, and Cicero classes it with

murder. Throughout the Middle Ages it was condemned by the Church and prohibited by statute. One of the main reasons for this attitude is found in the fact that until recent centuries little capital was lent for productive purposes. Loans were usually made for personal consumption and for the relief of the distressed. The lender could not have used productively the amount lent, and the borrower did not desire the loan for productive uses. Despite public opinion and the law, however, the taking of interest continued customary wherever commerce was developed, and with the industrial awakening in the modern period of capitalism it was, of course, allowed as a necessity.

Being allowed, it must needs be justified, and the explanations and justifications have been numerous and various. Earlier economists explained the laws of rent and wages, and then naïvely concluded that capital had what was left. The owner of capital was thus made the " residual claimant " in distribution. Others have thought that capital and land receive returns according to fixed laws, and that labor is the residual claimant. The truth seems to be that no one of the three is a residual claimant, but that each receives a return determined by regular laws. What, then, shall we say is the special law by which interest is determined? In answering this question, we shall try to make a statement of the case which shall reconcile conflicting theories, at the same time that we indicate briefly what those theories are.

Fallacious Views Regarding Interest. — To begin with, let us clear the ground by ridding the mind of certain views as to interest that are very widely held and that stand squarely across the path leading to just and clear views on the subject.

There is a very widespread opinion that the payment of interest to individual owners of capital is necessary to any accumulation of capital. This is clearly not so. If society

were to take over and manage all industry or the greater part of industry, it could create and maintain the needed capital out of the product of the industry. Society as a whole would in that case postpone possible present satisfactions for the purpose of easier and richer satisfactions from the resulting capitalistic production. It may well be that we do better to leave the accumulation of capital to the self-interest of individuals, but we have no right to think or to assert that capital can be secured in no other way.

Another fallacy, perhaps as widely held, and even more obstructive to just views of capital and interest, is the idea that interest is fundamentally an amount of money annually paid for the use of some larger amount of money. Of course, on the surface this seems to be true; otherwise, the idea would never have gained credence. But a little reflection will show the fallacy and the harm in the fallacy. In the first place, it will be found that actual money is rarely lent, borrowed, or repaid. What is transferred is control of wealth, — some form of purchasing power. As has been explained in an earlier chapter, a business man goes to his bank and sells his note, secured or unsecured, in exchange for a deposit. Against this deposit he draws checks at need to purchase needed goods, and especially capital in various forms. The bank pays out little gold or silver. In so far as it cannot balance checks against checks and so avoid payment, it pays out various forms of notes which are themselves merely credit instruments. Thus it is clear that when men borrow, they do not usually or really borrow money at all, but only purchasing power.

But again, such purchasing power, as the name implies, is not the real purpose or end of the borrowing. Nearly all borrowing has as its end the securing of capital, — real, physical, capital goods, to be used in the work of produc-

tion. If it were just as convenient to supply the capital goods in the first instance, the business man would rather have it so. And if capital could be so lent and borrowed, men could not have fallen into certain of their present wrong views of interest.

Probably nine persons out of ten, perhaps ninety-nine persons out of every hundred, believe that the rate of interest depends upon the amount of money. We have already given one way by which this fallacy may be detected, but experience gives sufficient warning that further explanation is required. And here again explanation may perhaps best take the form of illustration.

Assume a society with a given quantity of *circulation medium*, — and with a given quantity of capital goods. In this society John Doe is thinking of buying a cow for his dairy. At the actual level of prices he calculates how much he must pay for "keeping" the cow, including the feed, dairyman's wages, etc., and how much the milk and other products will bring in the market, at the existing price level. If, allowing for risk, depreciation, etc., he calculates that the products year by year will sell for $3 more than "cost of keep," he can, on a 6 per cent basis, afford to pay $50 for the cow. And if the current interest rate is 6 per cent, $50 will be the normal value of the cow.

Now assume that this quantity of money is doubled, and that, in accordance with the quantity theory of money, prices are doubled, what will be the result? Doe now calculates as before, but with all *prices* doubled, — prices of feed, labor, etc., on the one side, and of milk, cream, butter, etc., on the other. And by the same calculation as before, he finds now a surplus of $6. Clearly then he can now afford to pay $6 a year for the amount of purchasing power required to secure his possession of the cow. But

the rate of interest will remain unchanged, both because he can now get $100 of purchasing power as easily as he could before get $50 of such power, and because the price of the cow has now doubled with other prices, and stands at $100. And $6 is 6 per cent of $100, just as $3 is 6 per cent of $50.

If now we have succeeded in banishing forever from the mind of the student the fallacy that the interest rate is a function of the amount of money, we may go on to explain how interest really is determined.

Demand and Supply. — In the first place, it is probable that all economists would agree that interest, which expresses the annual value of the use of capital, is determined, as is all value, by the relation between the demand for capital goods and the supply of them. Where there is a strong demand for a limited supply of such goods, the marginal utility of the capital will be high, and the capitalist can exact a large return in the form of interest. If the demand for capital be slight relatively to the supply, then the rate of interest will be low. Manifestly, however, this does not carry us far upon our way. We proceed to inquire what it is that determines the demand and supply.

The Productivity Theory. — Investigation of the demand for capital brings us to one theory of interest which has been widely accepted, — the "productivity theory." To the older economists, who regarded most economic questions from the point of view of the business manager, it seemed sufficient to say that interest is paid because capital is productive, and that the amount of interest is determined by the degree of productiveness. From the side of demand we may agree that the productivity theory does give us an explanation of interest. When capital is very productive there will be a great demand for it.

The Marginal Productivity Theory. — In recent years a development of the productivity theory has been brilliantly advocated and widely accepted. The theory is essentially an application of the marginal utility analysis to the field of distribution. The utility of capital is not immediate, as in the case of consumers' goods, but intermediate. We use capital not to eat or wear, but to help in making things to eat and wear. And of capital, as of labor, it may be said that the more there is of it, the less productive will any part of it be, for two reasons. First, if capital be increased while the factor with which it coöperates remains unchanged in quantity, the physical product will not increase proportionately with the increase of capital. Thus if a thousand workmen be supplied at the same task with increasing quantities of implements of production, they will, it is true, continually increase output, but not in proportion with the increase of their equipment. In the second place, the increased output will have a less marginal utility. Products to-day are the results of widely varying combinations of labor and capital. Increasing capital, therefore, by increasing output according to the degree in which capital is important in production, will in the same varying degree lower the exchange values of those goods as compared with the others. Briefly, then, it may be stated as a law of capital: *other things being equal, every increase of capital* results in *a lowering of its marginal value productivity.* Adherents of this theory go on to add that in the actual world capital receives in interest an amount equal to its *marginal* productivity. While the productivity theory, and still more the marginal productivity theory, may offer for some purposes a good way of explaining why men *can* and will pay interest, it does not explain why they *must* do so.

The Abstinence Theory. — To understand why interest *must* be paid, we have to investigate the subject of the supply

of capital, and this brings us first to the so-called "abstinence theory." It has been said by some economists that interest is sufficiently explained when it is described as the wage or reward for abstinence. As we have seen, capital is the result of a special production made possible by saving. Saving or abstinence may not in any particular instance involve any great degree of suffering. Millionaires who do not consume at once and finally all that they have, are not thereby made to suffer the pangs of hunger. It may be that they would have great difficulty in consuming any large part of their goods. But saving does mean, none the less, the consumption of less than one might consume. We cannot have capital if all men consume all the goods that they can obtain.

It may help us to understand the relation between saving and interest if we think of actual saving as being the result of varying degrees of self-denial. There are probably many persons who would rather put by part of their present goods even if they could not thus obtain interest, or even if they had to pay a slight amount for the safe-keeping of their savings. If very little capital were required, therefore, the interest rate might fall to zero, since those who wished to save would be glad to lend their goods with a simple guarantee of repayment. But if capital is highly productive and in great demand, it will not be possible to secure the desired capital from the savings of those whose abstinence represents no sacrifice. It may be that when more capital is demanded, an increase which will bring the productiveness of the capital and the abstinence necessary to its formation into equilibrium, may be effected at a rate of one per cent. Suppose the productiveness of the capital to be still further increased. Then those who wish to engage in productive enterprises will be able to pay a higher rate and will increase the demand for capital. But, other things being equal, those who would

just save the needed amount of capital at one per cent must be paid a higher price if they are to undergo the added sacrifice necessary to the accumulation of more capital. This explanation should make it clear that on the side of supply it is to the *marginal* estimate of the sacrifice represented by the *marginal investment* that the rate corresponds. We may say in conclusion of this phase of the matter, then, that interest is fixed on the side of the supply of capital at a point which just repays the sacrifice involved in the marginal investment. As has been said, this rate, thus fixed, also equalizes the sacrifice of the marginal investor with the productivity of the marginal capital in use.

The Austrian — or Agio — Theory of Interest. — There is to-day a very general opinion among economists that none of the theories that have been explained above really goes to the root of the matter. We have, therefore, to explain another theory, which has in recent years received a great deal of attention. This is often called the Austrian theory, from the country of its origin. It is also frequently distinguished as the "agio" theory, from the Italian "aggio" (meaning, among other things, discount), because it finds the explanation of interest in the fact that future goods are discounted in terms of present goods, as we shall immediately explain.

We say that capital is productive and hence bears interest. But why, fundamentally, is it productive and of what is it productive? Strictly speaking, capital is not productive at all. To say that capital is productive is merely a short way of saying that human labor produces more by the use of capital than without. But granting that capital is productive in this sense, what is it that capital produces? Generally the things that it "produces" are quite different from itself. Machines make shoes. Railways carry goods

and persons. How can we compare the shoes with the machines, or the railway product with the railway equipment? Obviously, if we are to explain interest, we must claim that the aggregate value of the things produced is greater than the value of the producing agents, and that this difference in value is the interest. But have we any right to *assume* that the value of the product is greater than the value of the agent? To be sure, we know that the difference in value exists. But, by the same token, we know that there is such a thing as interest. It is admitted, too, that the difference in value and interest are the same thing, but it is contended that the real problem for us is to explain why there is this difference in value, which is admittedly interest. Why does the value of the aggregate product of capital exceed the value of the capital itself? And so, while certain economists explain that the marginal productivity theory is a sufficient explanation of the interest problem from the point of view of demand, but that it needs to be supplemented by a corresponding theory *from the point of view of supply*, other economists hold that the real explanation of interest lies deeper, and that their theory, rightly conceived, is an explanation of both the supply side and the demand side of the interest problem.

It is the position of the authors of this book that the theories explained above are partial. They are "true" in so far as they help us to sum up and understand large numbers of economic facts in a simple way. In other words, the theories are "true" in so far as they are useful or usable. And for many purposes these theories are probably more "workable" than the "Austrian" theory, which we shall now explain, admitting, though we do, that that theory includes in its scope more economic facts, and rests upon a deeper, stronger, and more philosophical foundation.

What, then, is it that determines the rate which the marginal investor will regard as just repaying him for his saving or abstinence? And what is it that causes the value of the aggregate product of capital to be greater than the value of the capital itself? These questions both find a common answer in the Agio theory of interest, which is usually associated with the name of Professor von Böhm-Bawerk, one of the leaders of the so-called Austrian or psychological school of economists. To repeat our questions in another form, Why is it that men — for instance, the marginal investor — will not give $50 now for $50 ten years hence, even though all risk should be amply covered by insurance? Why will not the marginal investor lend his money without interest even when the loan involves no risks? And why is it that the value of goods produced by machinery, after deduction of amounts representing all other expenses of production, is found greater than the value of the machinery itself? *Simply because desire, which is the source of value, is stronger for things near than for things far away.*

Human experience in a thousand lines furnishes abundant proof of this. The wants of men are like Esau's hunger. He would rather have — he values higher — a mess of pottage *now* than a whole inheritance *in the future.* "A bird in the hand is worth two in the bush." Distant enjoyments are vague to men's minds, while near ones are vivid and tempting. Thus it is that a man will rarely give present goods for future goods of like kind and amount, and hence *future goods are less valuable than present goods.*

Yet it becomes apparent on a moment's reflection that there is the greatest difference among men in the comparative estimates they place upon the present and the future. This is in part (1) *a matter of civilization.* Thus travelers have again and again pointed out that among primitive

peoples there is the utmost recklessness and improvidence of the future. Hence, among savages, if interest were demanded or allowed at all, the rate would be very high. The comparative valuation of present and future enjoyments (2) *varies widely also among civilized men.* Some there are who are almost as reckless of the future as is the savage, while there are others who would be glad to exchange a quantity of present goods for a like quantity or even a less quantity assured to them in the future. The provident classes would therefore save even if the rate of interest should fall to a very low figure. Finally, (3) the comparative valuation varies widely according to the *affluence or wealth of the individual.* What we must have to satisfy the pangs of hunger to-day is evidently more highly valued than the same things can be when obtainable only at a future time. Other things equal, then, the millionaire will, of course, overvalue the present less than will his poorer neighbor. The man who has an income just sufficient to satisfy his physical requirements cannot save, no matter how high the interest rate may be.

And so the Agio theory sums up for us briefly a multitude of facts bearing upon the supply of capital and the demand for it. *Saving, or investment, and productivity are alike due to differences in value between present and future goods of like kind and amount. The interest* (or agio) *is due to this difference. And the rate of interest equals and is determined by the marginal difference,* i.e. *by the difference as it exists in the minds of investors or savers and determines their marginal saving.*

Just one other concrete illustration. Suppose that with the interest rate standing at a certain point, something occurs to change the minds of the investors. Endow them all in equal degree with greater foresight of possible

future pleasures and pains. At once in the minds of all there is less difference in their valuation of present and future goods. They value the future more highly, and by necessity, since value is relative, they value the present less highly than they did before. Concretely, they value the machine more highly than before; the goods produced by it day by day they value less highly. The difference between the value of the machine and the value of its aggregate product falls. On the other hand, those who have been saving save more, while many who have not saved before join the ranks of investors, — which means, as we have explained in an earlier chapter, that they spend more for future goods and less for present goods, thereby bidding up the price of machines, and at the same time weakening the market for the product of machinery. From this concrete statement the student may see how the difference in value of present and future goods determines at once the supply of capital and the demand for it, and, through their interaction, the rate of interest.

Summary. — Let us now retrace the steps we have taken and state in summary form the theory of interest which is here developed. *Interest is determined primarily by the relation between the demand for capital and the supply of it, the rate being such as will make possible the widest possible use of capital in the existing state of demand and supply. The demand for capital is determined by its marginal productivity. The supply is determined by the marginal sacrifice involved in saving or postponement of consumption. Fundamentally, supply and demand are both determined by the marginal difference in the value of present and future goods of like kind and amount, and the rate of interest equals this agio.*

Different Loan Markets. — As we have made clear in the foregoing, the loans that lead all others in the modern world,

and that exercise a controlling influence upon interest, are (1) *loans for the purpose of acquiring and maintaining capital equipment for purposes of production.* Though the loan is usually made in the form of money or credit, it is not the supply of money that controls the market for such loans. If the capital goods could be secured directly, it would be even better and more economical. All that has gone before in this chapter, therefore, is in explanation of interest and the rate of interest on such loans.

There are, however, (2) *loan markets in which money itself, or credit, may practically be regarded as the real end and object of the loan.* In the "money streets" of great financial cities men are regularly incurring obligations which can be met by money or credit payment only. If one were to offer them other capital goods, the goods would be refused unless they could be exchanged at once and without loss for money or credit. In these narrow markets, it may in truth be said that the rate of interest depends upon the supply of money and credit and the demand for them *in those markets.* And it must further be admitted that in those markets, in an unusual degree, the amount of credit depends upon the amount of money, largely in the form of gold or gold certificates. As the reserves accumulate, the banks find it necessary to lower the *short time* interest rate, in order to profit by the credit that they may safely build upon the reserves. And it thus happens that extreme fluctuations in interest rates occur in such markets, even within short intervals of time. Thus the "street" in New York has seen the "call rates" fluctuate within a few months from 1 per cent to 100 per cent. It cannot be too strongly emphasized, however, that the student should keep the thought of money or credit entirely out of mind when he is considering or discussing the general problem of interest.

The interest paid on (3) *loans of wealth which is not capital,* — not used for purposes of further production, — is governed by the rate of interest paid for capital. It is the same percentage of value. The obvious reason is the power of the owner to sell his noncapitalistic goods and invest the proceeds in capital goods. If we should adopt the view that houses are not capital, but simply "consumers' goods," we should similarly have the rate of interest governed by the forces controlling the rate of interest on capital.

Practical Circumstances Affecting the Rate. — There is both a real and an apparent fluctuation in the interest rate from place to place and from time to time. The apparent fluctuation is that which is due to the inclusion of insurance against risk in a single rate with the real interest. Thus loans on good security always command a lower rate than others. This simply means that a man who takes some risks as to getting his money back adds to the *pure interest* a premium to cover the risk. Gross interest, then, includes the two elements of net or pure interest, — payment for the loan itself, — and insurance against risk of loss, or of trouble in collection. Naturally, therefore, interest tends to be higher in uncivilized countries and backward communities. Again, loans that run for years usually command a slightly lower rate than loans made for months, because with such loans the lender is saved the trouble of frequent reinvestment. Aside from these conditions, moreover, a steady diminution of pure or net interest occurs in most civilized countries. This last change is due, not to lessened risk, but to the change in mental comparisons between present and future goods. Present wants, being better satisfied, are less clamorous and contrast less vividly with future wants. Moreover, providence increases with civilization. The lowering of the pure interest rate means that the great body

of people are both less needy in the present and more thoughtful of the future.

The Recent Rise in the Interest Rate. — We began our discussion of interest with the careful explanation that it is determined fundamentally, not by the supply of money, but by the supply of capital. Later we qualified this by explaining how in the pure "money" markets of financial centers, the rate of interest varies inversely with the volume of available money and credit. The student may have a moment of amazed impatience when now he is finally told that, *under certain circumstances, interest varies directly with changes in the volume of money and credit.* Yet precisely this must now be said and explained. Between 1900 and 1915 there was an almost uninterrupted rise in the rate of interest on long-time loans represented by such securities as bonds. Bonds paying as low as three and four per cent, or even less, could be sold at par in the opening years of the century. Those same bonds now sell at a heavy discount, so that the purchaser at the lower price receives an interest yield on his investment rising to six per cent or over. And bonds of some great railways now have to offer interest rates of six per cent or better in order to sell at par.

We have already explained in another chapter the remarkable rise in the general price level that has resulted from the great increase of money and credit in the years from 1897 to 1915. In all that period manufacturers were buying materials and labor at the price level of one period and selling the finished product at the price level of a slightly later time. Broadly speaking, there was a continually recurring gap between the two price levels, which redounded to the advantage of the manufacturer. Under such circumstances, business men were more keenly competitive in the urgency of their demand for the world's stock of capital

goods, and this sharpened demand tended constantly to force up the price paid for the use of capital, *i.e.* interest.

On the other hand, as we have explained in the chapter on Money, inflation of money and credit lessens the purchasing power of money. A man who put $1000 into a savings bank in 1900 would find when he withdrew it in any subsequent year that he was getting back less purchasing power than he had originally put in. Under such conditions, long continuing, there would be a tendency for those who saved to avoid saving except at a higher rate. And this higher rate, as we have seen, business men would be led by keen competition to pay.

This same phenomenon may also be explained from the point of view of the Agio theory of interest. Steady and long-continuing rise of prices results in an increase in the relative value of present as compared with future goods, thus affecting in the same way the economic calculations of those who use capital and of those from whose saving the capital is derived.

In conclusion, it should be emphasized again that in this case it is really the capital interest that undergoes a change, although here it is a great and long-continued change of the quantity of money that results in the new equation of capital demand and capital supply.

Usury. — The word " usury," once applied to all interest, is now applied only to interest in excess of the rate allowed by law. The question of whether laws should be framed limiting the rate to be received and fixing penalties for violation has been much discussed. Economists are generally agreed that the state should not attempt to establish a rate, except so far as it can confine the action of the law to loans to the needy for personal consumption. In cases of this kind the experience of the world is increasingly in favor of

regulation. One effect of usury laws is worthy of special notice. When the law has established a fixed rate, under penalties, it may happen that law-abiding people will be unwilling to make loans at the legal rate, and that those who are willing to violate the laws will thus have an added reason for charging a higher rate than they otherwise would. Competition among lenders is lessened, and the risk of lending is increased. Both these items act in the direction of excessive rates. Though many countries have laws designed to prevent the taking of excessive interest, the commercial world, which is regulated in great measure by the honor of business men, commonly proceeds in disregard of the law's penalties. Those who borrow at excessive rates do so willingly and knowingly, and are in honor bound not to appeal to the law to escape their just debts.

SUMMARY

1. Interest is the reward paid for the use of capital.
2. Capital differs from land in that it is produced. Social capital consists of all producers' goods.
3. Speaking generally, interest is determined by the relation between the supply of capital and the demand for it, at a point or rate which equalizes the supply and the demand.
4. The demand for capital depends upon its marginal productiveness, the value of its product.
5. The supply of capital depends in general upon its cost of production, *i.e.* upon the sacrifice involved in postponement of consumption by the marginal saver or investor.
6. The cost of postponement of consumption arises from the fact that men regularly value more highly the present as compared with the future, and the cost is therefore measured by the extent of this higher valuation.
7. The same difference in value of present and future goods explains why capital is "productive."
8. Capital loans should be distinguished carefully from loans of money.
9. The interest rate, as ordinarily quoted, really measures the return for risk as well as the return for capital, which is

pure interest. Both gross interest and pure interest tend to fall with advancing civilization.

10. During periods in which an increase of money and credit results in a steady rise in general prices, the rate of interest on long-time loans rises to offset loss in the capital value of the loan.

QUESTIONS FOR RECITATION

1. What are the differences between capital and land? The resemblances?
2. What is interest? How was the taking of interest regarded in early times?
3. What is the supply and demand theory of interest? What is the marginal productivity theory? What element of truth does it contain? What is the abstinence theory? What element of truth does it contain? What is the Austrian theory? Are these theories necessarily contradictory?
4. State in summary form the complete theory of interest.
5. Is it right to say that the cost of capital is abstinence? What is meant by marginal investment? How do relative valuations of present and future compare in the case of children and adults? Of children and savages? Of rich and poor? What relation has this to interest?
6. Show in detail the services rendered to production by capital.
7. What different loan markets are to be distinguished? How is the "rent" of houses determined?
8. What two elements are there in the ordinary interest rate? What is pure interest? What two reasons are there for a fall in the interest rate with advancing civilization?
9. What is usury? What are usury laws? In what cases are usury laws beneficial?
10. Why has the interest rate on bonds risen since 1900?

QUESTIONS FOR STUDY AND DISCUSSION

1. The word interest is of Latin origin. What is its original meaning?
2. Could the rent of an acre of land be represented as interest?
3. What would be the effect on interest of an instantaneous doubling of the world's capital? Of increasing the efficiency of the present stock of capital?
4. Explain the differences in rates of interest in different sections of the United States.

5. If the present product of industry in the United States were more evenly distributed, what would be the effect upon saving? upon productivity of capital? upon relative values of present and future goods?
6. What are some of the effects of war on capital and investment?

LITERATURE

See list of works cited at close of Chapters II and III. Also:—
Böhm-Bawerk, E. von: *Capital and Interest*, Translator's Preface, pp. xix–xx; also *Positive Theory of Capital*, Bk. V, Ch. III, pp. 253–259.
Clark, J. B.: *The Distribution of Wealth*, Ch. XII, pp. 182–187.
Walker, F. A.: *Political Economy*, Pt. IV, Ch. III, pp. 218–232, and Pt. VI, § 1.
All standard works on Economics discuss these topics.

CHAPTER V

PROFITS

Economists recognize a fourth regular share in the distribution of the social income, though they have not been agreed as to precisely how it is determined. The name "profits" is commonly used to denote the total return to the entrepreneur from the sale of his product, after the payment of wages for labor employed and a further payment for land and capital hired. It is evident, however, that this return is not a simple one, but contains payments for several elements that call for separate treatment. We shall therefore speak of this return as *gross profits*, and inquire of what it consists, thus leading the way to an understanding of the net return which may be called, by contrast, *pure* or *net profit*.

I. **Rewards to Other Factors of Production.** — 1. *Interest.* — In the first place, it is evident that the return which the entrepreneur receives is in part due to the factors of production which he himself owns and uses in the business. The return to his capital invested is really interest, as truly as if it were to be paid to another person who owned the capital instead of to the entrepreneur owner himself. In estimating *net profits*, therefore, careful bookkeeping will deduct from gross profits interest on capital invested by the entrepreneur.

2. *Rent.* — The same thing, of course, holds true of land owned by the entrepreneur. Rent should be charged off in the same way as to an outside owner.

3. *Wages, Including Wages of Superintendence.* — The element of wages and salaries of every sort, including a *regularly estimated amount for the entrepreneur himself*, should also for scientific purposes be separated from gross profits in the calculation of net profits. Private and public corporations do this regularly, and the practice is frequent in those large non-corporate businesses in which the entrepreneur is employed just as is any other laborer.

II. **Charges of Maintenance.** — 1. *Replacement Fund or Depreciation Charge.* — In the second place, deduction must be made from gross profits of a sum sufficient to provide for the maintenance of the capital, or its replacement, as it is gradually used up, or as it is suddenly destroyed. Modern business bookkeeping commonly provides for the replacement of *gradual impairment* by keeping a separate account for what is called a maintenance fund. A man is facing business ruin who takes and consumes as profits from his plant what should be set aside for its upkeep and replacement.

2. *Insurance.* — The same may be said of the payment to provide against risk, which may be called *insurance.* The amount of money which a careful business man sets aside from the unusual gains of prosperous years to secure himself against disaster from losses in lean years is not profit. Insurance in this sense is much broader than insurance against fire, hail, etc., for which a policy may be taken out and a definite premium paid. It must be noticed that when a separate charge is made to cover such risk, the allowance for interest on the capital must leave out the part due to risk which we have seen to be present in gross or market interest; in other words, the interest will in such a case be the *pure* interest.

III. **Extra-Personal Gains.** — 1. *Monopoly Gains.* — Even with all these deductions, the analysis is not complete. We

must, in the third place, deduct extra-personal gains, — gains which are not due to the efficiency of the manager. One of these sources of gain lies in the possession of a monopoly advantage. Monopoly gains are a separate item in distribution, and if they are to be called profits, as they frequently are, we must carefully distinguish the particular nature of such profits.

2. *Conjunctural Gains.* — Closely resembling monopoly gains in certain respects is a class of gains known in recent economic discussion as *conjunctural.* As the name indicates, these are extra-personal gains resulting from a favorable conjuncture of circumstances, *which could not have been foreseen.* A simple instance of such a gain is seen in the profits made by retail dealers when the sudden death of a great personage creates unusual demand for mourning goods. Stocks of black goods which the merchant may have censured himself for accumulating may suddenly become the source of a considerable conjunctural gain. Here, however, a very real difficulty presents itself. In instances like that just mentioned, the conjunctural element can be plainly distinguished. But it often happens that such gains are at least in part the reward of foresight and energy, and are therefore to be classed as pure or net profit. The man who makes a fortune by buying up suburban property in an unlikely neighborhood, because he has had sufficient sagacity to foresee growth of population in that direction, may claim with some reason that his gain is not conjunctural. Even more reasonable would his claim be if, after buying the property, he himself directed the movement of population in that direction by securing improved rapid transit facilities and by other familiar expedients. In real life all the stages between clever business foresight and pure conjuncture are to be observed.

IV. Pure or Net Profits. — Our analysis, then, gives us as our concept of pure or net profits all that is left after deducting the items mentioned. Of course it will be understood that not every business shows in its gross profits all these different items. Sometimes it may even happen that there need be no further deductions than those for wages and a maintenance fund. But some of the other items are usually present in the estimate of gross profits.

How Net or Pure Profit is Determined. — *Society must at any time pay for its goods a price sufficient to give even the most inefficient manager whose services are necessary to the production of the supply, an amount covering the items other than net profits.* But no pure or net profits will accrue to such a marginal entrepreneur. More efficient managers will, therefore, be able to secure *differential* profit, the *amount of the differential in every case being determined by the extent to which these entrepreneurs individually surpass in efficiency the entrepreneur of only marginal efficiency.* Pure or net profit, therefore, is a purely personal gain — a return to superiority of management as such, independently of monopoly advantage, favorable conjuncture, or the mere labor of the manager as a superintendent.

Summary. — Let us summarize the considerations just presented: —

- Gross Profits
  - Reward to other factors of production
    - Interest on entrepreneur's capital.
    - Rent of entrepreneur's land.
    - Wages for entrepreneur's service.
  - Charges of maintenance
    - Replacement fund.
    - Insurance fund.
  - Extra-personal gains
    - Monopoly gains.
    - Conjunctural gains.
  - Net profit — Personal gains
    - Differential or pure profits.

Pure Profit and Rent Compared. — This explanation of the determination of pure profit as a surplus due to the superiority of a given entrepreneur over the marginal or poorest entrepreneur who can afford to stay in business at the current price of the product, is, as the student will doubtless have noticed, strikingly like the explanation of the determination of rent. Thus, *while wages and interest are price determining,* entering into the price of the product, *rent and profits are price determined;* they do not enter into the price of the product. Pure profit has hence been called, not inaptly, *personal rent,* or the rent of managing ability. Again, as with rent, it is interesting to notice the corollary that it is not the able managers, receiving large pure profit, any more than the fertile land, receiving large rent, that makes the prices of commodities high. If all land were of the highest grade of fertility, the price of produce would be lessened; and in the same way, if all managers were of the same order of talent as our ablest managers, goods would be produced at a lower marginal expense, and society would reap the benefit in lower prices. But there is this marked difference between the rent of land and pure profits. The more fertile lands can exercise little influence in raising the quality of inferior soils, while superior entrepreneurs are always tending to make the knowledge and skill requisite for success a matter of common property. As business becomes more completely organized, falling more and more into routine; as knowledge becomes more widely diffused throughout the business community; and as governments improve in regularity and firmness and honesty, the marginal expense of production and the resulting prices tend to fall, and profits in consequence tend to lower and lower limits. It is in this sense that profits may be spoken of as " the lure that insures improvement."

Pure Profit and Monopoly Gains Contrasted. — Under sharp and increasing competition, pure profit rests upon a precarious foundation. If the special ability upon which the profit depends is such as cannot be duplicated, the profit will perish with the single possessor; if the special ability can be duplicated, rival concerns will possess themselves of entrepreneurs of equal efficiency, and the special advantage tends to disappear through competition. But, as we have said, there are certain permanent extra-personal advantages, entirely equivalent otherwise to natural ability, which may become the exclusive and permanent property of a business organization. In case of such possession, competition is either entirely impossible or it is possible only on terms which give to the holder of the monopoly advantage a considerable differential return. When such an advantage is enjoyed, the power of competition over price is removed; prices no longer stand at the point of cost; and a surplus over rent, wages, interest, and profits is a regular result. Unless interfered with by legislation, there could be no outside influence to prevent a monopoly from asking any price it pleased, subject only to the action of the law of monopoly price which has been explained in the chapter on Monopolies.

Another sharp contrast between pure profits and monopoly gains lies in the fact that whereas pure profit is a surplus *produced by superior efficiency*, and is in so far no burden to the community, — which, indeed, tends to gain by it in the end, — monopoly profit, on the other hand, is a surplus *extorted by power and privilege*, and is usually a source of loss to the community. Distribution of wealth is coming increasingly under the influence of monopoly. The economic surplus taken by monopoly is the source of many of the largest fortunes of our day, and is one of the main causes of the growing inequalities of fortune, especially since our

Civil War. *While, in general, competition increases in severity, an increasing proportion of the industrial field is withdrawn from competition and falls under the control of monopoly.*

In passing judgment on big business to-day, therefore, it is most important to discover whether the size of the business and of its profits is due to some monopoly advantage or advantages, or whether it is due simply to the unusual ability of its managers.

Capital and Capitalization. — In considering monopoly gains, it is important to understand the distinction between capital and capitalization. *Capitalization means the amount at which a business or property is valued.* The word is therefore used in the language of the market in two ways. It is sometimes used to describe the par value of the stock and other securities issued by the company, as representing the *company's nominal valuation* of the business and its earning power. The word is also used to denote the market value of the business or of its securities taken as a whole. Thus a company may be capitalized at $10,000,000 in the sense that its securities have that par value, while the market estimate of the value of the business, as reflected in the prices paid for its securities, may be much less or much more than $10,000,000. Capitalization in either of these two senses may be many times the amount of capital actually invested, since it is based, not on investment or material cost, but upon earning power.

When we speak of current interest as being 5 per cent, we mean that free and disposable capital can regularly command that rate of return in competitive industry. Let us suppose that the return on equally safe investments that are open to all is about 5 per cent, while the annual return to a great oil company, which has actually invested $100,000,000 in

the business, is 50 per cent. The business may in that case be capitalized at $1,000,000,000, in such a way that the great earnings on the *actual investment* will appear as only 5 per cent on the *capitalization*. To those who are ignorant of the difference between capital and capitalization, monopolies can often, by such a plan as this, appeal successfully for sympathy and support on the ground of insufficient earnings, even when the return on their actual investment is many times the market rate.

As profits on new investments in competitive industries fall, the capitalization of monopoly earnings may be raised in proportion, even without the investment of new capital. For instance, if a monopoly has an earning power of $50,000 a year, the capitalization of this return at 5 per cent would stand at $1,000,000. If, then, the current rate of interest should fall to 4 per cent, while the monopoly earnings suffered no change, the capitalization of the monopoly, represented by the *market value* of its securities, would rise to $1,250,000.

And yet it must be remembered that the owners of the stock of monopolistic businesses often include many persons who have paid on the basis of the capitalized value, and who do not therefore receive from the monopoly a greater return than they would receive from investments in competitive industry. It is those who "get in on the ground floor," and who are thus enabled to sell at the capitalized value stock which they have received on the basis of actual investment, who divide among them the capitalized monopoly earnings.

SUMMARY

1. The word "profits" as ordinarily used in business often includes many elements of income which are not really profits. The total surplus left in the employer's hands after the payment of contract wages, rent, and interest should be called gross profits.

2. To obtain the net profits of a business there must be subtracted from the gross profits (1) a normal return for the employer's own capital, land, and services, *i.e.* interest, rent, and wages of superintendence; (2) charges of maintenance, including funds for replacement and insurance; (3) extra-personal gains, including those arising from monopoly and from chance.
3. The remainder, or the pure net profit, is a differential return due to the superior ability of the entrepreneur, and is in many respects similar to rent.
4. Pure profits tend to diminish, other things being equal, as education becomes more widely diffused and as industry becomes more completely organized under regular routine.
5. Monopoly profits, on the other hand, have a more permanent character in the absence of government interference.
6. Under modern conditions of business, monopoly profits are often disguised by their form of capitalization.

QUESTIONS FOR RECITATION

1. What are gross profits? What is the difference between gross profits and pure profits?
2. Name the deductions that must be made from gross profits to arrive at net profits.
3. What is the replacement fund? Insurance fund?
4. What are the two classes of extra-personal gains? What is meant by the word "conjunctural"? Mention instances of conjunctural gains that have fallen under your observation or that you have met with in reading.
5. What caution must be observed in estimating conjunctural profits?
6. Why are pure profits like rent? How do pure profits and rent compare as to their tendency to increase or decrease? What effect does competition have in the long run on pure profits? On monopoly profits?
7. Why is it that monopoly profits often appear to be only equal to the normal interest rate? What bearing does this have upon popular opinion regarding monopolies?
8. What is the difference between capital and capitalization? Explain the process of capitalization.
9. What is the effect of a falling interest rate upon the capitalized value of a monopoly privilege?

QUESTIONS FOR STUDY AND DISCUSSION

1. What effects upon profits are to be expected from general education? from industrial education? from the development of trade publications?
2. Trace the resemblance between profits and wages in the case of a great singer.
3. How far is it possible to discover the several distributive shares in the financial statement of a railway or industrial corporation?
4. If industrial change and progress were to stop, would profits be affected?
5. What are some of the different ways in which the superior *entrepreneur* may manifest his superiority? If an entrepreneur who excels in marketing his product unites with an entrepreneur who excels in factory management, what results may be expected?

LITERATURE

See note on literature at close of preceding chapter. Also:—
Ely, R. T.: *Monopolies and Trusts*, Ch. III.
Jenks, J. W.: *The Trust Problem.*
Meade, E. S.: *Trust Finance.*
Report of the United States Industrial Commission, Vol. XIX, pp. 724–730.
Taussig, F. W.: *Principles of Political Economy.*
Walker, F. A.: *Principles of Political Economy.*

CHAPTER VI

SOCIALISM

The Relation of Socialism to Distribution. — In the preceding chapters we have explained how in the existing social organization the annual produce of industry — the social income — is distributed. As we stated at the outset, the method of distribution is intimately connected with the legal structure of society, and particularly with the laws of property. Society, as it exists in all advanced nations, accepts private property as its economic basis. In other words, in the great majority of goods, private proprietorship or private appropriation is not only permitted but encouraged, and the result is the system of distribution which has been described.

There are considerable differences in the laws about property observed by different nations, and minor changes are constantly being made; and these differences and changes result in corresponding differences and changes in distribution. It would take us too far afield to attempt to treat of them in detail. But socialism, which may be described as a plan for changing the very foundation of our economic organization, has been proposed and discussed so seriously, and commands to-day so many enthusiastic advocates, that we cannot pass it by in silence in our analysis of economic theory.

Such a fundamental change as socialists propose would, we shall see in the following pages, profoundly affect every

one of the four phases of economic activity which we have chosen as the natural divisions of economic analysis, — consumption, production, exchange, and distribution. But socialism has been put forward more particularly as a remedy for existing evils in the distribution of the social income, and we may therefore treat the subject properly under that head. It may be noted in passing, moreover, that in general discussions of the proposed change it is commonly assumed that labor and wages would be especially affected, and socialism is therefore often handled in direct connection with the subject of wages and plans for improving the status of labor.

General Characteristics. — We have already described some of the various changes in the relation of the laborer to the product of his labor that have been tried or put forward. It has been pointed out that one of these plans, coöperation, may be either voluntary or coercive, — that is, ordered and controlled by the state. Now coercive coöperation is but another name for socialism. What, then, is socialism? It is, in fact, coercive or compulsory coöperation, not merely in undertakings of a monopolistic nature, but in all important productive enterprises. Socialists seek the establishment of *industrial democracy* through the agency of the state, which they hold to be the only instrument for accomplishing their end. They would expand the business functions of government until all dominant kinds of business are absorbed. They would have all such business regulated by the people in their organic capacity, every man and every woman having essentially the same rights as any other man or woman. Our political organization would become also an industrial organization, with universal suffrage. Private property in profit-producing business and rent-producing land would be abolished, although private property in incomes would be in the main preserved. What is desired

by the socialist, then, is not, as is supposed by the uninformed, a division or diffusion of property, but rather an increased concentration of a very large part of property. The socialists do not complain that productive property is concentrated too much, but they object that it is not yet sufficiently concentrated. They therefore rejoice in the formation of trusts and combinations, regarding them as a development in the desired direction.

The Four Elements of Socialism. — There are four characteristic features of pure socialism: first, the *common ownership of the means of production;* second, the *common management of the means of production;* third, the *distribution of the product of industry by common authority;* fourth, *private property in the greater part of income.* Socialists make no war on capital, strictly speaking. What socialists object to is not capital, but the *private capitalist.* They desire to *socialize* capital and to abolish capitalists as a distinct class by making everybody, as a member of the community, a capitalist; that is, a joint owner of substantially the whole of the capital in the country.

In support of this plan, socialists generally claim that labor creates all wealth. No rational socialist means by this to deny that land and capital are factors or agents of production; but, as they are only passive factors, the socialist holds that their owners should not receive a share of the product simply through such ownership. Man is the only active agent, and all production is conducted for the sake of man. Socialists admit that, with industry organized as it is now, the owners of land and capital must receive a return; and hence they desire that these tools should become social property.

Distributive Justice. — The central aim of socialism, its pivotal point, is *distributive justice.* While it seeks to in-

crease production by more efficient organization and better methods, its leading thought is the just distribution of the product. The ideas of socialists on the question of what constitutes justice in distribution are not harmonious. Some say that (1) *equality* meets the claims of justice; others urge (2) *distribution in proportion to real needs,* so that each man may have the economic means for his fullest development; while yet others say that justice demands distribution (3) *in proportion to merit or service rendered* — but *that the service must be that of the individual, not of his ancestors.*

Socialism an Extension of Existing Institutions. — The English government now monopolizes the postal service, the telegraph, and the telephone; nearly all governments, local or central, control the roads; some own canals and railways; many even possess factories of various kinds, and probably every national government does at least a little manufacturing; many of them also plant forests, and some cultivate arable land. We have already seen that governments already touch the business world in the following ways: (1) *they protect person and property;* (2) *they create and guarantee certain special privileges;* (3) *they regulate the terms of contract and of competition;* (4) *they participate in private enterprises by favorable tariffs, bounties, subsidies, etc.;* (5) *they carry on certain industrial processes,* such as the construction and maintenance of roads, parks, lighthouses, telegraphs, coins, etc. To picture to ourselves socialism pure and simple, therefore, we have only to imagine an extension of what exists already until a point is reached where society, through its government, cultivates the land, manufactures the goods, conducts the exchanges, and in short prosecutes most *productive enterprises.* Such private industry alone would be permitted as would not threaten the dominating power of society in production and in distribution. Thus

individuals would probably be allowed to cultivate small areas of land, and, here and there, there might perhaps exist a private printing-press supported from private income.

Not All Public Business is Socialistic. — It must be observed that it is not every public activity in relation to industry which is socialistic. *Properly speaking, that only can be considered socialistic which tends to render government dominant throughout production.* Does any proposed measure tend to the suppression of production by individuals or by voluntary coöperation, and to its absorption by the government? Then it is socialistic; otherwise it is not. This is the only way to distinguish between socialistic and nonsocialistic, or even antisocialistic measures. It furnishes us with a rational ground for judgment. Are compulsory education and free schools socialistic? By our test they are decidedly antisocialistic. By developing capacity for self-help they enable those who grow up under their influence to make the best of existing institutions. They are, indeed, a conservative force. Is municipal ownership of gas works, electric-lighting works, or other natural monopolies, socialistic? No; for they accord with the modern tendency to separate sharply the proper industrial functions of private persons from the proper industrial functions of the organized community. There is a sound principle — not socialistic — underlying the modern tendency. The conviction is gradually being forced both by theory and by experience that most of those industries which are natural monopolies will in the end be owned and worked by governments, and that outside the field of natural monopoly there is a territory sharply defined in which business can flourish only in the atmosphere of private enterprise and competition. If we separate thus frankly and rationally the private from the public industrial sphere, we lay firmly the strongest

possible foundation for the existing industrial order, instead of allowing men to drift haphazard into socialism or chaos.

Socialism makes perhaps its most powerful claim when it pleads, first, for a *scientific organization of the productive forces of society,* and second, *for a just distribution of the social income from production.*

1. *The Relation of Socialism to Production.* — When the opponent of socialism objects to that system on the ground that an equal division of the social income would result in portions pitifully small for each individual, the socialist replies: "There is little to divide now, naturally enough. Competition is wasteful. Two railways run where one would be enough. Three times as many milk wagons, horses, and drivers are required to serve the people with milk as would amply suffice if the business were organized on the plan of the distribution of letters and parcels. Look at the shops, wholesale and retail, and note the waste of human force. Millions of dollars are expended annually in advertising, and this sum would be saved in the socialistic state. Without competition the whole dry goods and grocery business could be conducted with a third of the present expenditure of economic energy. Reflect, too, on all the idle classes in society, both the idle rich and the idle poor. Socialism would find a place for every man, and would put all into their proper place, and by making each dependent on his own exertions for success, would stimulate our energies." The socialistic argument, continued indefinitely in this strain, is telling. It does not prove the point, however, unless we grant three assumptions: first, *that present waste and idleness cannot be suppressed altogether or diminished greatly* without departing from the fundamental principles of our existing order; second, *that* in the advantages of competition

there are not social gains which more than outweigh the social losses just described; and third, *that socialism is practicable.*

2. *The Relation of Socialism to Distribution. — Distributive justice* advances also a strong plea for the adoption of the program of socialism. It cannot be claimed for a moment that every man's income is now adjusted to his social service. An income proportioned to desert appeals to a sense of right and fitness; but cannot we approach more closely to that ideal than at present through social reform, without going to the extreme of social reorganization? No doubt the idle man is morally a thief. He receives, but in return he gives no personal effort. Any man who has not earned the right of repose by his own past services, with fruitful physical or mental toil, is a shameless cumberer of the earth, unless, indeed, he is incapacitated for useful employment.

Social Obligations of Wealth. — We may derive hope from the fact that men everywhere are coming now to recognize the social obligations resting on the individual. Dr. James Fraser, late Bishop of Manchester, expressed the idea in words the essential thought of which is this: "Most of us are compelled by our necessities to render service to our fellows. Some of us, however, have inherited or received money in some way without a return on our part. We are placed by God on our honour. It becomes a matter, not of physical compulsion, but of honour for us to serve our fellows." What is here said would apply also to those who become wealthy through the accidental discovery of valuable treasures, such as oil, natural gas, or gold on or under the soil which they own, or through the growth of cities, which adds immensely to the value of favored land. Were you to receive an accession of wealth in such a way, the wealth would be yours in the eyes of the law, but morally it would be simply a new opportunity for helping the progress

of humanity. It is the clear realization of this idea that leads men of wealth, especially in America, to endow so generously universities and other institutions for the public welfare. This idea is contained in the epigram, now famous, of one of our richest manufacturers, "To die rich is to die disgraced."

3 and 4. *The Relation of Socialism to Exchange and Consumption.* — We cannot find the space necessary to discuss all the economic changes that would appear in a socialistic state. It must suffice merely to note that exchange and consumption, as well as production and distribution, would be revolutionized. A credit economy might supersede entirely our present mixed money and credit economy, and socialism, to be consistent, would have to make exchange values accurately proportionate to costs in human labor and in other sacrifice. Moreover, equitable distribution of a product largely increased, if it could be achieved, would of course be reflected in the amount and character of the goods consumed. Particularly, it may be supposed that inclusive or common, as contrasted with exclusive, enjoyment of wealth would fill a much greater place in the life of a people socialistically organized.

The Weaknesses of Socialism. — In considering socialism as a scheme for social reconstruction, a number of difficulties are suggested. Prominent among these is (1) the probable numbing effect of the system upon individual initiative and energy. What motive to activity can take the place of the desire for individual and family advancement through the accumulation of private property? Another very grave difficulty lies in (2) the introduction of the requisite unity in the organization and management of industry. In some industries where the work is of a routine nature, the problem of organization may not be impossible of solution. But

what shall we say of such industries as agriculture, which has hitherto resisted all efforts at centralization? In the third place, (3) the socialist state would have the herculean task of apportioning work of all conceivable degrees of difficulty and disagreeableness among the workers. How could this be accomplished without engendering a universal discontent that would be fatal to the plan at its first inception?

Again (4) the danger to personal freedom under the proposed system seems very real. Up to a certain point, it is true, government seems to improve as its functions increase in number and importance. But would this hold true indefinitely? We may even grant, for argument's sake, that, as our very livelihood would depend on the efficiency of government, all the force and energy that are now expended in private service would be diverted into public channels. But what would happen if, in spite of all precautions, some unscrupulous combination should secure control of the state? Would there remain, inside or outside of the government, standing ground for effective, yet pacific, opposition? It is to be feared that there would not. Dissatisfaction would exist, for human nature is such that man cannot be thoroughly satisfied with his surroundings. The danger is that, without proper means for its expression, this dissatisfaction would grow and spread beneath the surface of society, until, having no other vent, it would at last issue in revolution.

Finally, we may lay down the general rule that (5) the domination of a single industrial principle is dangerous to civilization. Many writers have pointed out that it was the dominance of a single social principle that led to the downfall of the old civilizations. What is needed is a coördination of the two principles, — the principle of private and of public business. It is desirable that some should serve the

public in an official capacity, for some men are specially adapted for that work; but it is equally desirable that an ample field should be left for those who prefer private initiative and activity. Our present system, much as it may need reform, offers opportunity for coördination of these two principles; socialism would not.

But it is as difficult to predict the ways in which socialism would fail as it is for the socialists to say definitely how it would work, and this suggests their real weakness: they venture to forecast the course of economic evolution too far in advance. Certainly we must have ideals and look forward to the future, but we are unable to say very long beforehand what will be the best means of attaining these ideals. The hope that a juster distribution of wealth will prevail, and that income will represent more and more fully social service, is cherished by many who do not call themselves socialists, and who believe it wise to concentrate their efforts on practicable social reform.

Our Debt to Socialists. — Socialists have rendered society a real service by calling attention to pressing social problems; by forcing us to reflect upon the condition of the less fortunate classes; by quickening our consciences; by helping us to form the habit, not yet generally acquired, of looking at all questions from the standpoint of public welfare and not merely from that of individual gain; and finally, by calling our attention to the industrial functions of government, thus leading us and aiding us to separate rationally the sphere of private industry from that of public business.

Socialism not Anarchism. — Socialism has been described as industrial democracy established and controlled by government. It is evident, therefore, that the socialist would give to government the greatest possible authority. At the opposite extreme stands a proposed system which is strangely

enough often confused by the ignorant with socialism. *Anarchism would do away with government entirely, leaving all activity to individuals acting voluntarily; socialism,* as we have seen, *would lessen the sphere of individual initiative, leaving the greater part of industrial activity in the hands of government.* In the main, therefore, anarchism and socialism are antithetical. Yet there are some anarchists who believe that, were governments abolished, individuals would freely of their own accord form coöperative groups which, federated, would manage all production. Anarchy is, in the minds of most thinking people, inconceivable.

Communism, Socialism, and Collectivism. — Communism is a term which is not much used in recent writing. In the past it was employed to designate an extreme kind of socialism. Communism required equality of possessions and of income, without much regard to the matter of the regulation of production. Some writers have used the word "communism" to designate violent schemes of radical social reforms as distinguished from the more peaceful and conservative plans of reconstruction, which they intend by the name socialism. Yet the communistic societies in the United States are composed of peace men, who do not believe in war, and even preach nonresistance to aggression. It is as well, perhaps, to abandon the attempt to make a permanent distinction between communism and socialism, by simply discarding the word "communism." Collectivism is a name which many socialists of recent years have favored as a designation of their program. Sometimes they have chosen the term in order to escape the odium which in past years has been attached to the older word.

Divisions among Socialists. — Socialism is not only a theory of society, but also a practical program. Socialists are far from being of one mind as to what ought to be done

to bring about socialism. A small minority of them believe that the advocacy of socialism through the medium of the written and spoken word is sufficient. To that group belong many of the *Christian Socialists*, who base their argument and their hope upon the Christian Gospel. Another minority, probably somewhat larger than the former, while holding that socialists should actively participate in politics, favor action through any progressive party, especially if it is a labor party. Such are the *Fabian Socialists* in England, who have adopted as their rule of action "Make Haste Slowly." But the preponderant majority of socialists believe that socialists ought always to form a distinctive party of their own with a clear-cut socialist program.

Yet even among the political socialists there has arisen, during the past fifteen years, a strong divergence of opinion. The more radical of them minimize the importance of immediate betterment of the condition of the wage earner, and look to the enactment of the full socialist program as being by far the most important aim worth striving for, even though it might not be achieved for many years to come. These socialists designate themselves as Marxists, or *Scientific Socialists*, and are more or less literal followers of Karl Marx, who in his large work, *Capital*, tried to show that socialism is destined to arrive in its time, through the evolution of the great underlying forces in industrial society, namely, the concentration of capital in a few hands and the growing misery of the working class under the capitalist system. The other faction, the *Revisionists*, question the correctness of the Marxian forecast and prefer to work for legislation which will immediately improve the lot of the workingmen. Notwithstanding their differences, Revisionists and Marxists coöperate in the same political party, which generally, but notably in Germany, is known as the

Social Democratic Party, and its followers as Social Democrats. Perhaps the larger part of political socialists in Europe and America are still Marxists.

In opposition to both brands of political socialism, especially the Revisionists, we find the French Syndicalists, who maintain that no political party is capable of keeping out corruption from its midst, who believe in the "war of the classes" and the "general strike," and who would commit the ownership and control of each industry to the workingmen organized in syndicates or trade unions, and loosely bound together in the C. G. T. (the "Confédération Générale du Travail"). Syndicalism has within recent years spread rapidly to other countries. In the United States, it is represented by the so-called "I.W.W.," *i.e.* Industrial Workers of the World.

As socialism depends for its success upon arousing the emotions of the masses of the people, it meets formidable rivals in both nationalism and imperialism, which make their appeal to another set of powerful emotions that sway the modern man, namely, the desire to lift one's nation above the others in power and in the sphere of its dominion.

Present Status of the Socialist Political Movement. — Socialism as a general political movement has been making rapid strides in Europe within the last few years. It is impossible to form an accurate estimate of the aggregate number of political socialists at the present time, but certain figures are available which indicate the quick growth and present status of the party. Thus in the German Empire the number of votes cast for socialist candidates for the Reichstag rose in the sixteen years, 1887 to 1903, from 763,128 to 3,011,114. This represents a change from 10.1 per cent to 31.7 per cent of the entire vote of the Empire. In 1912 the figure was 34.9 per cent, the total of votes was 4,250,329,

and, though the actual number of Social Democratic members of the Reichstag was only 110, it should on the basis of votes cast have been 131. Ninety-three newspapers, with a circulation of 1,800,000, belonged to the party in 1914.

In Italy, in 1913, 53 "regular" socialists were elected to Parliament by 825,000 votes; in Austria, in 1911, there were 82 socialist members of the Lower House, elected by over a million votes; and in Vienna alone, 20 of the 33 representatives were socialists. In France, in the election of 1914, 102 socialist deputies were elected, and the total socialist vote was slightly below 1,400,000; but the fact that M. Millerand, a socialist, found a place in the Cabinet formed in 1901, and that M. Briand, another former socialist, became Prime Minister subsequently, to be followed at a later date by M. Viviani, is perhaps more significant than many figures. In England, where large parties have always been few in number, socialism has shown a tendency to avoid the ordinary political channels. The same is true of the United States, although in recent elections surprising gains have been made by organized socialists. In 1912 the total socialist vote for President was about 900,000; but in 1916 the socialist vote for President exceeded 600,000 only slightly. A conservative estimate of the total socialist vote of the world would place it probably in the neighborhood of 10,000,000. We should not overlook the fact that many who vote for socialist candidates do so, not because they are socialists, but because they desire to express in a most telling way their discontent with existing governments. That particularly applies to Germany.

SUMMARY

1. Socialism is coercive coöperation in production.
2. Socialists would permit private property in income, but not in means of production.

3. Socialists claim that labor produces all wealth, and they aim at a distribution based on justice.
4. Socialism is but an extension of existing institutions.
5. The strength of socialism lies in its suggested saving of waste, in its proposal for a juster distribution, and in its demand for the recognition of the social obligations of wealth.
6. Its weakness lies in its requirement of impossible human virtues.
7. Anarchism is really the opposite of socialism.
8. There are many differences of view among socialists, these differences giving rise to distinct names for the different groups.
9. The political socialists have increased rapidly in number in Europe during recent years.

QUESTIONS FOR RECITATION

1. Define socialism; anarchism. What is Christian socialism? Evolutionary socialism? Fabian socialism?
2. How far does socialism abolish private property?
3. What effect would socialism, if successful, have on production? On distribution? On exchange? On consumption?
4. What difficulties stand in the way of realization of socialism?
5. Why is it not right to say of every public interference in industry that it is socialistic? When may a measure be called socialistic?
6. What is the origin of wealth according to socialists? Discuss this claim.
7. Why is anarchism not feasible?

QUESTIONS FOR STUDY AND DISCUSSION

1. Consider carefully possible answers to the question, commonly directed against socialism: Who would do the "dirty work"?
2. Discuss the argument for and against the use of diamonds.
3. Discuss the possible bearings of socialism on the growth of population.
4. Would universal education to the twentieth year of age be socialism? Would it bring about equality of income?
5. Would abolition of the right of inheritance be socialism?
6. Can society work toward equality of income without "taking from those who have"?
7. Is it socially and politically desirable that there should be a closer approach to equality of income than is the case to-day? Would there be an economic gain?

8. What constitutional changes would be required for the introduction of socialism in the United States?
9. Study conditions in your own neighborhood and consider whether or not, as to wage-earners and others, they correspond to the allegations of the socialists.
10. Name prominent poets and novelists and politicians who belong to one or another of the socialist schools.

LITERATURE

Brooks, J. G.: *The Social Unrest*, Ch. VIII.

Ely, R. T.: *Property and Contract in their Relations to the Distribution of Wealth*, especially Vol. II, Appendix III, pp. 823–852, Production, Present and Future, by Dr. W. I. King; and also *Socialism and Social Reform.*

Enson, E. C. K.: *Modern Socialism.*

Kirkup, E.: *Inquiry into Socialism*, and *History of Socialism.*

Marx, Karl: *Capital.*

Mill, J. S.: *Principles of Political Economy*, Bk. II, Ch. I, §§ 2, 3, and 4.

Morley, H. (Editor): *Ideal Commonwealths.*

Rae, J.: *Contemporary Socialism.*

Spargo, John: *Karl Marx, his Life and Work;* also numerous other books and pamphlets.

Walling, William English: *Socialism as It Is*, *Progressivism and After*, and also *Socialism of Today.*

Arguments against Socialism are found in nearly all standard economic treatises, *e.g.* those by Marshall, Taussig, Seager, Seligman.

BOOK IV

PUBLIC FINANCE

CHAPTER I

EXPENDITURE AND REVENUE

Definition of Public Finance. — Public finance is *the science, or the branch of economics, which deals with the revenues and expenditures of government, and with their administration.* The name must be carefully distinguished from *private finance,* which deals with the revenues and expenditures of an individual or a private business, and from *corporation finance,* which deals with the revenues and expenditures of private corporations. The student is also cautioned against referring the word, as is often mistakenly done, to the subjects of money and banking, which belong to another part of economics.

Early treatises in English economics usually had no special part devoted to public finance, but included some observations on taxation in the treatment of other general topics. It is true that the difficulty of saying anything satisfactory about a subject so vast, within the scope of a few pages, is a serious one; yet it does not seem scientifically satisfactory to pass over one of the most important economic topics, even in an elementary treatise. We shall therefore attempt

to give some impression as to the nature and scope of public finance, while reminding the student that later and more careful study of the subject should be carried on with the help of some regular textbook entirely devoted to it.

The Magnitude and Influence of Public Business. — Government business is the largest single business in every great nation. So vast and so permeating is it that it affects vitally all other businesses. If our government should have a large surplus every year, and should keep it out of circulation, we should shortly have a stringency in the money market that would result in a terrible panic. Still another feature of government business has an important bearing on all private business: government to-day is the largest single employer of labor, and hence profoundly influences the conditions of employment elsewhere.

The Magnitude of Public Expenditure. — The importance of public finance becomes more apparent when we consider the magnitude of government expenditures in modern times. The fact has often been cited that England's expenditure increased forty-fold between 1685 and 1841, while her population was increasing only threefold; but this is only one of many equally significant facts. The annual *national* expenditure of Great Britain, after a slight decrease following the Napoleonic wars, has increased quite regularly since, rising from about $235,000,000 in 1833 to nearly $1,000,000,000 in 1913–14, just before the outbreak of the European War.

The French *budget*,— the name applied to the *detailed statement of revenues and expenditures* — showed expenditures of a thousand million francs, or about $200,000,000, in 1821 for the first time, and the result was widespread alarm; yet no French budget since that time has called for smaller expenditure, and in 1913 the total annual expenditure of

France and her minor governmental divisions amounted to more than five times the figure of 1821.

Growth of Expenditure in the United States. — The following table shows a similar increase in the Federal expenditures of the United States down to 1914, since which year the increase has been even more rapid for reasons growing out of the great war: —

FEDERAL EXPENDITURES OF THE UNITED STATES

(Exclusive of "premiums," postal service, Panama Canal, and principal of public debt)

YEAR	ORDINARY EXPENDITURES	INTEREST	TOTAL	PER CAPITA
1792	$ 5,896,000	$ 2,373,000	$ 8,269,000	$2.04
1800	7,411,000	3,402,000	10,813,000	1.17
1820	13,134,000	5,151,000	18,285,000	1.90
1840	24,139,000	174,000	24,313,000	1.42
1860	60,056,000	3,144,000	63,200,000	2.01
1870	164,421,000	129,235,000	293,656,000	7.61
1880	169,090,000	95,757,000	264,847,000	5.28
1890	261,637,000	36,099,000	297,736,000	4.75
1900	447,553,000	40,160,000	487,713,000	6.39
1910	638,450,000	21,275,000	659,705,000	7.30
1914	677,390,000	22,683,000	700,253,000	7.07

Causes of Growth. — It must not be thought that this great increase in public expenditures is due to recklessness or dishonesty. Probably, on the whole, government has improved during the last century; and it is significant that where government is most undoubtedly honest, there have been larger increases than in many other quarters. The explanation of the increase is not difficult. In the first place, we must remember that population has been increasing more rapidly than ever before, and that increase in aggregate

expenditure does not mean a proportionate increase in the burden borne by individuals. Other causes are the drift toward the city, the greater density of population, the general increase of wealth, higher standards of living, and higher price levels. The increase of government expenditure is less startling when compared with the growth of national wealth-capita. Besides this, we must conclude that government activity, while wiser than before, is also more extensive and important. Public schools, provision for public health, public parks, public baths, public libraries, all show the greatly increased range of state activity in modern times. With some unfortunate exceptions these increased expenditures are a sign of health, and do not indicate any tendency on the part of government to absorb an undue proportion of the industrial life of the nation.

This can hardly be said, however, of the great increase in expenditure for pensions and for military and naval equipment. Whether these expenditures have been wisely or unwisely made, it is at least regrettable that considerably more than 70 per cent of the regular Federal expenditures are due to past wars and to the preparation for war. The burden of this expenditure alone amounted in 1910 to about $439,781,000, or an average of about $4.70 for every man, woman, and child in the United States. This represented about $24 a year for every family of five. Laws passed in 1915 and 1916 still further increased the per capita expense attributable to war.

Classification of Public Expenditures. — So numerous are the objects of governmental expenditure that it is manifestly impossible to treat the subject exhaustively within the limits of our space. We must content ourselves here with a consideration of some of the more important classes into which such expenditures fall.

1. *Expenditures for Fulfilling the Protective Functions of the State.* — Of the general class of expenditures incurred in fulfilling the protective function of the state, the first to be mentioned are those (*a*) *for security from foes without the state.* Under this head falls the cost of the army and navy. The direct cost of national defense includes the pay and equipment of troops, and the cost of ships, cannon, ammunition, etc. The indirect cost is represented by the pension list, as well as by the great waste of resources and opportunities for labor in times of war.

(*b*) *Internal Security.* — Under expenditures for internal security are included the cost of our police system in all its branches, — including constables, sheriffs, etc., — and that of our judiciary system, since both of these are occupied almost wholly in securing persons and property from injury.

(*c*) *Expenditures for the Poor and Unfortunate.* — Every civilized government recognizes an obligation to extend relief to paupers, to the deaf, the blind, the insane, and the feeble-minded, who, from natural defects, are unable to hold their own in the struggle for existence.

2. *Expenditures for Fulfilling the Commercial Functions.* — A second general class of expenditures consists of those which are incurred in fulfilling the commercial functions of the state. Among these are expenditures (*a*) *for the construction and maintenance of such agencies as roads, bridges, canals, and riverways, improved harbors, lighthouses, etc.* (*b*) *The post-office and telegraph and railway lines* are also commercial as well as educational in their purpose, but they are generally managed as self-sustaining or remunerative investments, even when they are under the ownership and management of the state. A similar expenditure for commerce is that (*c*) *for maintaining a currency and systems of weights and measures.* (*d*) Expenditure for the *consular*

service also falls under the same general head. To a less degree the same may be said of the diplomatic service, though in this case the purpose of the service is perhaps primarily for maintaining international peace.

3. *Expenditures for Fulfilling the Developmental Functions.* — The third general class of expenditures consists of those incurred in fulfilling the developmental function of the state. Most important among these is (*a*) the expenditure for *education.* Of all classes of expenditure that for education has grown most constantly and rapidly in the modern state. Under the head of education fall not only the education of the schools, but also that which is to be gained from art galleries and museums and other agencies for the promotion of culture.

Other expenditures falling in the same general class are those for (*b*) *public recreation,* for (*c*) *investigation,* for (*d*) *maintaining equitable conditions for private business,* for (*e*) *agricultural development,* and for (*f*) *public health service.*

4. *Expenditures for the Maintenance of Government.* — The expenditures we have been considering are, of course, expenditures *by* government: we have now to mention a fourth general class, — the expenditures *for* government; that is, expenditures for governmental functions too general and fundamental to be ranged under any of the heads that we have before mentioned, corresponding to the so-called "overhead" costs of a private business. Such are the expenditures for (*a*) *legislation and administration,* and for (*b*) *tax collection.*

Objects of Public Expenditure in the United States. — It is not customary for governments to classify their expenditures as we have here classified them, or in any such way as will show accurately just what the government pays for the objects which we have discussed. But a careful

study of Federal, state, and local expenditures will show that the greater part of the Federal expenditure is for the protective and commercial functions, while the greater part of the expense of the developmental functions rests upon the state and local governments. Considering the aggregate expenditures of all the divisions of government, we find that they are roughly divided as follows: for the protective functions, about 45 per cent; for the developmental functions, about 30 per cent; for the commercial functions, about 15 per cent; and for the expenses of government itself, about 10 per cent.

It is also interesting to note the relative growth of expenditure in the different political divisions of the government. Not only in the United States, but also quite generally throughout the civilized world an increasing proportion of the aggregate expenditure is being made by the local governments, from which it appears that the greatest increase in governmental activity occurs where government is most directly and closely watched and administered by the people themselves. In the United States, until the last few years, the expenditures of the state governments have, as a rule, diminished in importance relatively both to Federal and local expenditures, and this fact has generally been held to indicate growing nationalization as well as growing governmental activity; but within recent years the state expenditures have grown rapidly, showing that the states are increasing in social and economic significance.

Classification of Public Revenues. — Differing classifications of public revenue have been almost as numerous as the writers who have made them. Without entering into a discussion of the reasons for such differences, we may present at once a classification which is in general harmony with the usual treatment of the subject.

A. Permanent Revenues.
   I. Regular revenues.
      1. Derived directly from government ownership.
         a. Revenues from public domains.
         b. Revenues from public industries.
      2. Derived from the incomes of private persons and corporations.
         a. Fees.
         b. Special assessments.
         c. Taxes.
   II. Irregular and miscellaneous. Fines, forfeits, escheats, gifts, indemnities, etc.
B. Temporary Revenues. (To be repaid.)
   I. Public loans by the sale of bonds.
   II. Public loans by the issue of treasury notes.

The subject of public revenue is a complicated one and can only be briefly outlined here. Of the above forms of revenue, only public loans, fees, special assessments, and taxes will be discussed.

Public Loans. — Great national debts are comparatively new in the world's history. Indeed, their origin is as recent as the reign of William and Mary in England. During the nineteenth century they grew with threatening rapidity in nearly all the countries of the civilized world. Even before the great European war, grave doubts were entertained as to the ability of some of the European peoples to carry the burden of their debt. The war in its first year is calculated to have involved an extra expenditure of nearly $18,000,000,000 by the nations involved, and by far the greater part of this expenditure was cared for by public loans. Before the close of the year 1915 the war had already resulted in a doubling of the public debt of the belligerent nations.

Fees and Special Assessments. — Fees and special assessments closely resemble taxes, but they are of much less significance in the fiscal system. A fee is a "*payment made to the state on the occasion of some specific service rendered by the state to the citizen, — the service, however, being non-commercial in character.*" The payment demanded for recording a deed or mortgage is a fee; so, also, is any court charge, or a charge for a teacher's certificate, a marriage license, etc. A special assessment, which is even more like a regular tax, may be defined as "*a compulsory contribution, levied in proportion to the special benefits derived, to defray the cost of a specific improvement to property, undertaken in the public interest.*" Thus American cities often provide for the paving of particular streets by laying part of the cost upon the entire municipality in the form of a tax, and placing the remainder of the burden, in the form of a special assessment, upon the owners of "abutting" properties in proportion to the value of such properties. In this way the entire city helps pay for the benefit conferred upon the city, while the people living on the street or owning business property there pay for the special benefit which the improvement has conferred upon them. The custom of municipal improvement by special assessment has been developed much farther in the United States than in Europe.

Taxes. — The most important and most regular source of public revenues is taxation. *Taxes are one-sided transfers of valuable things, exacted by public authority, chiefly from citizens, but also from other persons within its reach, according to some general rule, in order to meet public expenses and to accomplish other public ends.* Taxes differ from fees and special assessments, therefore, chiefly in that there is no attempt to proportion the tax to the benefit conferred upon

the individual. The justification of taxation lies simply in the necessity of maintaining the state. If the people are to have a state they must pay for it, and no better means than taxation has yet been discovered.

What is a Just Tax? — No question regarding taxation has been more earnestly discussed than the question of what constitutes justice in taxation. One answer that is commonly heard is that taxes should be proportioned (1) to *benefits derived.* But it is utterly impracticable to attempt to say what proportion of the general benefits of government accrue to particular individuals. And even if this were practicable, it would probably be found in many cases that the greatest relative benefits are enjoyed by the weak and the poor, who are least able to bear the tax burden.

The Faculty Theory. — A theory more generally accepted by economists to-day is that taxation (2) should be proportioned to *"faculty," or ability to pay.* But even when this rule has been accepted, there remains the difficult question, How is faculty to be measured? One answer has been that we may measure ability by (*a*) *consumption;* but it is evident that the consumption of the poor is out of all proportion to their ability to bear the burdens of the state. Another suggested basis of measurement (*b*) is *property;* but property differs widely in its productiveness, and, moreover, many persons with little property have large incomes, and therefore great ability to bear taxation. Perhaps the least objectionable measure of ability is afforded (*c*) by *income,* though even here we must note that incomes differ in permanence and security, and that equal incomes are called upon to support very unequal numbers of persons. It is not possible to reach a single perfectly just basis of apportionment of the tax burden; but the levying of taxes on income, with variations to correct manifest cases of in-

equity, probably approaches as near to ideal taxation as is possible to-day.

Granting this, another question at once presents itself for solution. Shall taxes *be laid in direct proportion to income,* or shall the rate be *increased as the amount of income increases?* The first method is called (*a*) *proportional taxation;* the second, (*b*) *progressive or graduated.* Sometimes taxes are neither proportional nor progressive, but (*c*) *regressive;* that is, *the rate diminishes as the taxed property or income becomes larger.* Such taxes every one admits to be unjust, though many such taxes are levied. The opinion of students everywhere seems on the whole tending to favor progressive rates.

Direct and Indirect Taxes. — In concluding our discussion there remains to be noted a distinction, frequently seen in economic writings, between *direct* and *indirect* taxation. The meaning attributed to these terms at different times and by different writers has varied widely, but a common definition is that *direct taxes are taxes laid by the state upon those who are expected to bear the burden of them,* while *indirect taxes are expected to be shifted to other persons.*

Poll taxes, property taxes, income and inheritance taxes are usually called direct, while customs taxes and excise taxes are called indirect. The importer of goods subject to duty pays the tax, but recoups himself from the enhanced price which he is able to charge the consumer of the goods.

As taxation is the most important single subject in the domain of public finance, we shall present a more detailed treatment in the following chapter, in connection with the topic Revenues in the United States.

The Single Tax. — Many intelligent citizens of England, the United States, and other countries are adherents and devoted advocates of a scheme for entirely abolishing taxa-

tion, as that word is ordinarily understood. Mr. Henry George, author of *Progress and Poverty*, a man of wonderfully earnest human sympathies, and of very strong and sincere convictions, gave the latter part of his life to the advocacy of the plan, which he himself did most to formulate and popularize in modern times. We can do no better, therefore, than to explain the proposed system in Mr. George's own words, as printed in his paper, the *Standard:* —

"The *Standard* advocates the abolition of all taxes upon industry and the products of industry, and the taking, by taxation upon land values, irrespective of improvements, of the annual rental value of all those various forms of natural opportunities embraced under the general term, Land.

"We hold that to tax labor or its products is to discourage industry. We hold that to tax land values to their full amount will render it impossible for any man to exact from others a price for the privilege of using those bounties of nature in which all living men have an equal right of use; that it will compel every individual controlling natural opportunities to utilize them by employment of labor or abandon them to others; that it will thus provide opportunities of work for all men, and secure to each the full reward of his labor; and that as a result involuntary poverty will be abolished, and the greed, intemperance, and vice that spring from poverty and the dread of poverty will be swept away."

The proposition is here definitely made that the state should take all of the pure or economic rent of land, and the claim is made in explanation and justification of the policy that it will abolish poverty. Such a policy might, indeed, prevent landowners who do not care to use their land from keeping it out of the hands of those who would use it; but how it would effect all the other predicted blessings

is difficult for most people to comprehend. In the first place, there are, no doubt, administrative difficulties in the way of separating the pure economic rent of land from the annual value of the separable improvements on the land. But apart from this difficulty, the appropriation of economic rent by the public without compensation to the owners does not appeal to the conscience of the American public as a just thing to do. No abstract reasoning, based on "natural rights," will persuade a modern nation to so radical a step. This honestly and earnestly advocated policy is only one more illustration of the danger of basing social reasoning on any theory of "natural rights."

Some advocates of the higher taxation of land values, recognizing the unwisdom or injustice of appropriating all rents now existing, propose instead that the state shall take, under the form of taxation, *all future increments* in ground rents which increasing population may create. England, Germany, and some Canadian cities may be said to have moved in this direction within recent years, by laying a special tax on increases in urban rents; but probably in no country in the world is a greater proportion of increment in land values taken for public purposes than in those states of the American Union where land is taxed according to selling value, and where also the land owners pay for improvements, either wholly or in large part. This is the case, for example, in Wisconsin. It frequently happens in American cities that taxes and special assessments take far more than the increment in values and leave the owner with the unearned decrements.

One argument in favor of the special tax on urban land is that in cities it is easy to separate economic rent from the earnings of improvements, such as buildings. In fact, as has been stated elsewhere in these pages, such a separation

is frequently made. Even here, however, it is well to proceed very cautiously. Confiscation, at any rate, should not be tolerated. If great and expensive changes along this line should commend themselves to the people, the burden of the changes should be widely diffused throughout the community by means of inheritance and other taxes.

SUMMARY

1. Public finance treats of the revenues and expenditures of government.
2. Government business is everywhere the largest single business, and profoundly influences all private business.
3. Public expenditure in civilized states has been rapidly increasing, owing both to the rapid increase in population and to the widened scope of government activity.
4. Public expenditures are for fulfilling the protective, the commercial, the developmental, and the self-sustaining functions of government.
5. Public revenues are derived from public domains and industries, from fees, special assessments, and taxes, from fines, gifts, etc., and from public loans.
6. Taxes, the chief source of revenue, are compulsory payments for government expenses.
7. A just tax is one which conforms to the ability of the taxpayer to bear the burden.
8. Direct taxes are intended to be borne by those paying them; indirect taxes are designed to be shifted.
9. The proposed plan of taking all the economic rent of agricultural land for the support of the state, is impracticable, and, unless compensation is provided for, is morally indefensible; special taxation of urban rents, especially of future increments of rent, stands on a different footing.

QUESTIONS FOR RECITATION

1. What is public finance? From what is it to be distinguished?
2. What is the bearing of public finance upon the labor problem?
3. Why have public expenditures so uniformly increased during the last century?
4. Classify public expenditures, and name particular expenditures falling under each group.

5. What classes of expenditure have shown the most rapid increase in the last century?
6. What are fees? Special assessments? Taxes? What are the differences among them?
7. How do revenues from loans differ from other revenues?
8. What is the justification of taxation? What are the theories regarding just taxation?
9. What are some of the different proposals made by Single Taxers? What is the difference between them? Discuss the justice and practicability of these proposals.

QUESTIONS FOR STUDY AND DISCUSSION

1. Study the financial report of your own town or city, and of your own state. What are their sources of revenue? their objects of expenditure?
2. Why are poll taxes regressive?
3. How far do the debts of the world represent reproductive investment?
4. Name some proportional, progressive, and regressive taxes in the United States to-day.
5. Study carefully the claims of the proponents and opponents of the single tax.

LITERATURE

Adams, H. C.: *The Science of Finance*, §§ 10, 18, and 49, and *Public Debts*.
Bastable, C. F.: *Public Finance*.
Daniels, W. M.: *The Elements of Public Finance*, pp. 30–33 and pp. 36–38.
Ely, R. T.: *Property and Contract* (for a discussion of the single tax, consult references in the index).
Fillebrown, C. B.: *The ABC of Taxation*. (A presentation of the single tax theory.)
George, H.: *Progress and Poverty*.
Plehn, C. C.: *Introduction to Public Finance*.
Seligman, E. R. A.: *Essays in Taxation*.
Shearman, Thomas G.: *Natural Taxation*.

CHAPTER II

REVENUES IN THE UNITED STATES

I. Federal Revenues

The following table shows the Federal revenue classified by sources for the fiscal year ending June 30, 1914: —

Customs		$292,320,015
Internal revenue		380,041,007
Postal service		287,934,566
Miscellaneous:		
Profits on coinage, bullion deposits, and assays	$ 6,182,560	
Sales of public lands	2,571,775	
Fees: consular, letters patent, etc.	5,774,104	
Tax on National banks	3,883,198	
Forest reserve fund	2,486,901	
Immigration fund	5,216,150	
Other miscellaneous	36,197,457	
		62,312,145
Public-debt receipts		23,021,222
Total revenue		$1,045,628,955

Customs Taxes. — As appears in the table, the government derives a very large proportion of its whole revenue from customs duties, which are taxes laid upon imported commodities. In earlier days, and particularly before the Civil War, the customs duties constituted nearly the whole of the Federal revenues; and even now, in times of peace, not far from one third of the ordinary tax receipts of the national government are from this source.

Custom duties are either *specific* or *ad valorem*. *Specific duties are duties laid in proportion to weight or number*, without regard to value, while *ad valorem duties are levied in proportion to the value of the commodities imported.* Ad valorem duties are open to the objection that they offer a greater temptation to fraudulent valuations, and hence make more difficult the work of the customs officers. Specific duties, on the other hand, while they can be more easily administered, are open to the serious objection that they impose a relatively heavier burden upon less valuable goods of any class.

Although long use and practical convenience have given the customs duties a large and apparently secure place in our financial system, there are certain evident objections to such taxation which must be borne in mind by the student in considering the general question of tax reform. These objections call for explanation.

Objections to Customs Duties. — 1. *Their Regressive Character.* — First of all, it is an objection against such taxes that they are regressive in character. Customs duties, to yield a large revenue, must be levied upon goods of very general consumption, and moreover fiscal reasons lead to the imposition of high rates upon such commodities. But it is for precisely such commodities that people of only moderate incomes spend a greater proportion of their income than do the rich. Therefore the tax is regressive; it lays a disproportionate burden upon the poor people and people of moderate means.

2. *Effect upon Industry.* — In the second place, such taxes, if they are "protective" in character, seem to interfere with what may be regarded as the "natural" disposition of the nation's labor and capital. Moreover, it regularly happens that such a tariff takes much more from consumers

than ever finds its way into the Federal treasury, since only imported goods yield a revenue, while all goods, imported and domestic, are sold at a higher price to the consumer. If the tax be not protective, then, to meet the requirements of the revenue, goods must be brought in at certain ports or made in certain ways, so that customs and excise officials can inspect and see that the state is not defrauded; and, even with the system of bonding, — where commodities are placed in bonded warehouses, from which they are only removed and pay the tax when they are about to be sold, — some interval must elapse between the payment and its recovery in the price charged to the consumer, and some interest must be lost on the capital locked up for that period.

3. *Inelasticity.* — The two objections just explained are based chiefly upon social and industrial considerations. A third objection is directly financial in its nature. One mark of a good tax is its elasticity. Now few taxes are more inelastic than customs duties. Frequent changes of tariff rates are fatal to that stability of industrial conditions without which business cannot prosper. Unusual demands upon the Federal purse cannot be met by changes in the tariff schedules.

4. *Uncertainty.* — And hence results still a fourth objection, also financial in character. It is a serious defect of such taxes that they are likely to yield least when government need is greatest. A war, calling for unusual expenditures, is certain to curtail international trade and hence revenues from customs duties. Moreover, recurrent industrial depressions affect most seriously the government's receipts from this source.

Excise Taxes. — *Excise duties or taxes are those levied directly upon certain classes of goods produced within the*

country. These taxes are also known as Internal Revenue taxes. The method of collecting excise taxes has been developed into a simple and effective system. Producers of tobacco, cigars, whiskey, etc., must purchase revenue stamps from the government and put these upon the packages containing the goods in such a way that opening the packages will destroy the stamps.

Excise taxes are regularly classed with customs duties as indirect taxes, because, while they are laid directly upon producers, it is supposed that they will be shifted to consumers in the enhanced price of the commodity. In some other respects, too, excise taxes are open to the same objections that lie against customs duties. They are regressive in character, though, as they are laid chiefly upon liquors and tobacco, the injustice of their regressive character is less grave. But, on the other hand, excise taxes have proved very productive, and they offer relatively little difficulty in collection. Moreover, they form a more reliable source of revenue than do customs duties, in that they fluctuate less in times of war and in periods of industrial depression.

Mention has been made of the regressive character of customs duties and excise taxes. It must be remembered, however, that these taxes are only two features in modern systems of taxation. It is quite possible that taxes of these kinds may be balanced by income and property taxes resting more heavily upon the rich than upon the poor, so that the inequality of one kind will be offset by the inequality of a different kind. We have to consider in the United States not only the Federal taxes, but state and local taxes, before we can tell whether the taxes are just or unjust in the way they affect different classes in the community.

Taxes on Transactions. — In times of urgent need, as in the War of 1812, the Civil War, the war with Spain, and

during the great European war, the Federal government has imposed taxes upon various sorts of transactions. Thus the Act of 1898 imposed "stamp" taxes on bank checks, telegrams, freight and express receipts, transfers of stocks and bonds, bills of exchange, etc., the method of collecting the revenue being similar to that described in the case of excise taxes.

Though such taxes may be made the source of large and easily collected revenue, they are not likely to be resorted to except in times of emergency, since their general effect is greatly to impede business; and a check on business activity soon lessens the revenue from other sources. In most cases taxes on transactions are borne by the consumer or purchaser, though in some cases, if the tax be a small one, the producer or seller will "pocket the loss."

The Federal Income Tax. — The United States now derives a substantial proportion of the Federal revenues from income taxation. This was made possible by the amendment to the Federal constitution adopted in 1913. Before that time, according to the interpretation of the constitution by the Supreme Court, an income tax that included a tax upon income derived from land, must, as being a direct tax, be apportioned among the states according to their population. But a tax so apportioned was too manifestly unjust to be considered. The constitutional amendment which made a fair Federal income tax possible was finally secured by the people after a generation of excited and expensive agitation and effort.

The present federal income tax law is incorporated in the Revenue Act of September 8, 1916. The Act distinguishes two classes of incomes, those of *persons* and those of *corporations*. A tax of two per cent is laid upon the net incomes of corporations of nearly all kinds. The same "*normal*" tax of two per cent is laid upon all personal net incomes above

$3000 a year; but the head of a family, a married man living with his wife or a married woman living with her husband is entitled to an exemption of an additional $1000 of income. This exemption cannot be claimed by both, and only $4000 of the aggregate income of man and wife can be exempt from taxation when they are living together.

So much of personal income in excess of $3000 or $4000 as is derived from the earnings of corporations, which pay the two per cent corporation tax, is also free from the normal personal income tax of two per cent.

In addition to the normal tax of two per cent, personal net incomes above $20,000 pay a graded "*supertax*" or additional tax as follows: —

Incomes	Rate of Supertax
$20,000– 40,000	1%
40,000– 60,000	2%
60,000– 80,000	3%
80,000– 100,000	4%
100,000– 150,000	5%
150,000– 200,000	6%
200,000– 250,000	7%
250,000– 300,000	8%
300,000– 500,000	9%
500,000–1,000,000	10%
1,000,000–1,500,000	11%
1,500,000–2,000,000	12%
2,000,000–	13%

An illustration may aid the student in understanding the operation of the tax. Let us suppose the case of a married man having a net income of $1,000,000 a year obtained from earnings, bonds, mortgages, and similar investments. His income is taxed as shown in the accompanying table. The net tax rate on the whole income, obtained by dividing the whole tax by the whole income, would in this case equal 10.292 per cent.

$4,000 exempt		
4,000– 20,000 at 2%		$ 320
20,000– 40,000 at 3%		600
40,000– 60,000 at 4%		800
60,000– 80,000 at 5%		1,000
80,000– 100,000 at 6%		1,200
100,000– 150,000 at 7%		3,500
150,000– 200,000 at 8%		4,000
200,000– 250,000 at 9%		4,500
250,000– 300,000 at 10%		5,000
300,000– 500,000 at 11%		22,000
500,000–1,000,000 at 12%		60,000
Total tax		$102,920

In the first complete year of the operation of the law 1914–1915, 174,205 corporations paid a tax of $38,986,952, and 357,515 individuals paid personal incomes taxes aggregating about $41,046,162.

The numbers of personal incomes reported for different income classes during the first complete tax year are shown in the following table: —

Net Annual Income	Number Reported
$500,000 and over	174
250,000 to 500,000	346
100,000 to 250,000	1,828
75,000 to 100,000	1,501
50,000 to 75,000	3,660
20,000 to 50,000	23,348
15,000 to 20,000	15,790
10,000 to 15,000	34,141
5,000 to 10,000	127,448
4,000 to 5,000	66,525
3,000 to 4,000	82,754

It thus appears that about one-third of one per cent of the American people have annual incomes of $3000 or more a year. Apparently less than one per cent of the families are living on such incomes.

The Income Tax in Practice. — In considering the claim for and against income taxation, we are aided by the wide and varied experience of other nations in the use of this tax. First of all, it is to be noted that in Australasia, England, Italy, Germany, and other countries in which the income tax has been given a trial, (1) *experience has justified this form of taxation,* according to the majority opinion of those who have considered the matter. Moreover, it is especially noteworthy that income taxation (2) *gains in economy and productiveness, and wins increasing approbation as the years go by.*

In the third place, (3) there is little question that an income tax, assuming it to be fairly enforceable, *conforms almost perfectly to the ideal* of taxation, *that men should pay* the expenses of the state *in proportion to their "faculty"* or ability, since income is by all means the best single mark of such ability. Where the tax is applied uniformly upon all kinds of income, (4) *it cannot be shifted easily,* and the tax on rent and monopoly privileges of all sorts cannot be shifted at all. This itself is a strong recommendation of the tax. (5) *Moreover, income taxation lends itself easily to the use of the principle of progression, by which the regressive character of other taxes may be offset.*

Exemption. — It is usual, as in the present federal income tax, to exempt a certain minimum of income from taxation, for the reason that possessors of small and moderate incomes already pay a disproportionate share of other taxes, and for the further very practical reason that the expense of collecting the tax on such incomes bears too high a proportion to the return to render such taxation economical.

The Federal Inheritance Tax. — The Revenue Act of September 8, 1916, in addition to increasing the rates of the income tax, imposed an inheritance tax. During the

Civil and Spanish-American wars we had short-lived Federal inheritance taxes, as emergency measures. Unlike those taxes, the present Federal inheritance tax law is designed to be a permanent feature of our revenue system.

This tax is imposed upon the transfer of the entire net estate of every decedent, whether a resident or a non-resident of the United States. The "net estate" upon which the tax is imposed is the gross estate of the decedent, less deductions for the expenses of administration, debts, and losses, and an exemption in all cases of $50,000, except in estates of non-residents. The rates are as follows: —

Amount of "Net Estate" (Gross estate less permitted deduction and an exemption of $50,000)	Tax Per Cent
Up to $50,000	1
50,000– 150,000	2
150,000– 250,000	3
250,000– 450,000	4
450,000–1,000,000	5
1,000,000–2,000,000	6
2,000,000–3,000,000	7
3,000,000–4,000,000	8
4,000,000–5,000,000	9
5,000,000 and up	10

II. State Revenues

We come next to taxation by the commonwealths, and in beginning it may be well to study the following table showing the revenues of New York State for the fiscal year ending September 30, 1913, as given in the report of the State Comptroller for 1914: —

Direct taxes		$11,154,114.25
Indirect taxes (a purely administrative classification, not to be regarded in the sense of the definition given in the preceding chapter)		
Excise	9,280,681.65	
Corporations	10,910,529.13	
Organization of corporations	455,512.50	
Inheritance tax	12,724,236.86	
Stock transfer	2,927,810.88	
Miscellaneous	4,083,019.81	
		40,381,990.83
Non resident taxes		50,434.18
		51,586,339.26
Sales of public lands		42,729.45
Fees and other receipts of public officers		638,204.01
Fines, fees, duties, etc.		387,465.19
Miscellaneous receipts from institutions		754,431.92
Other receipts		1,716,790.96
Total to general fund		55,125,960.79
Receipts for special funds		37,654,068.69
Total receipts into treasury from all sources		92,780,029.48

Poll Taxes. — One antiquated source of revenue which does not appear in the table is the poll tax. Many states levy poll or capitation taxes, to be paid into the state or local treasury. *Poll taxes are taxes usually levied at a uniform rate upon practically all male citizens.* They are difficult of collection, in the highest degree inequitable, and are gradually disappearing from the financial systems of advanced governments.

General Property Tax. — The greater part of the revenue entered in the table under the name Direct State Taxes is from a general property tax, *a tax which is levied — in theory — upon nearly all property, real and personal, on a uniform basis of assessment and at a uniform rate.* The importance of this tax appears in the fact that revenue derived from it in the commonwealths of the United States constitutes more than one half of the state and local revenues, and nearly

one third of the total revenues of the country, — national, state, and local. And yet all economists who have written upon the subject, and nearly all state officers who have to do with the administration of the tax, have not been able to speak of it otherwise than in terms of severe condemnation. Naturally, then, there is now a strong tendency to work away from this form of taxation. Some of the many serious faults which the general property tax has everywhere shown call for comment and explanation.

Though the method of assessment and apportionment differs in many details among the states, it is the usual custom for assessors in each community to prepare complete statements of all or nearly all kinds of taxable property owned by the people of the community. In some states the assessors receive from all residents sworn "lists" of property owned and subject to tax. By the terms of the law, the property is supposed to be rated at its true, full value, though by the acknowledged practice of assessors and courts of review, the real rates vary widely from state to state, and even from community to community. On the basis of the property valuations thus made the state and local governments, — county and town, — levy direct taxes at a rate fixed from year to year according to the fiscal needs. The tax is then collected by local officers, and of the whole amount the portion levied by the county and state is passed on to the designated officers after each minor political division has set aside its share.

1. *Unjust Apportionment.* — The first of the defects of the tax appears in the apportionment of the state's share of the tax. Each community has a narrow, selfish interest in reducing its valuation in order that it may escape its just share of the tax. In this sordid struggle of community against community, assessments are made to vary all the

way from 10 to 90 per cent of the true values. The same mean struggle is especially frequent between city and country districts. To correct the evil, state boards of equalization or state tax commissions have usually been appointed. Wisconsin seems to have succeeded better by this method in lessening the inequities of assessment in the general property tax system than any other state.

2. *Inequity as between Realty and Personalty.* — In the second place, the general property tax has proved grossly inequitable in laying an undue proportion of its burden upon real property, allowing various forms of personal property to escape with a slight tax or with no tax at all. A secondary result of this inequity is that the rural districts bear a disproportionate burden, since the greater part of the tax-escaping personalty is owned by the wealthy citizens of our cities.

3. *Inequalities of City Assessments.* — Very similar to the preceding evils is the further injustice wrought by the tax through the disproportionate assessment of the pieces of real estate in cities. Several state tax commissions have found and reported that in the case of city properties the proportion between the assessed value and the real value quite regularly varies inversely as the value of the property. Thus in one case it was found that some of the most valuable properties were assessed at only about one-tenth of the real value, while properties of little value were regularly assessed at from five to eight tenths of their value. This evil has been considerably lessened in recent years.

4. *Temptation to Dishonesty.* — It follows from the evils already described that the general property tax leads to a shocking amount of dishonesty, perjury, bribery, and other forms of corruption. Indeed, as one writer has expressed it, "The general property tax has gone far toward making perjury respectable and even virtuous."

Inasmuch as the general property tax has been condemned by nearly all students of finance and by financial administrators, we should all welcome the present tendency on the part of the states to turn to other forms of taxation. In several commonwealths the state governments have entirely or nearly abandoned the general property tax, leaving it chiefly to the smaller political divisions; and other commonwealths are moving in the same direction.

Corporation Taxes. — Partly owing to the proved injustice of the general property tax, but partly also owing to the recent great growth of the corporate form of business enterprise, there has been in the last quarter of a century a considerable development along the line of taxation of corporations. In some cases, as in New York, there are two taxes thus laid, one upon the organization of such corporations, and another upon their annual business. It has been found much easier to reach the revenues of such businesses directly than to reach them through the taxation of the stocks and bonds of the corporations in the hands of individual owners. New York, Pennsylvania, Vermont, Wisconsin, and Massachusetts are among the states that have come nearest to abandoning the general property tax, and developing in its stead taxation of corporations.

License Taxes. — Another form of state taxation that has undergone a considerable development in recent years is that of business licenses. When, as is the case in our Southern states, licenses are required for many different kinds of business, serious disturbance to business results. But much may be said in favor of a system of taxing by license a few industries which it is generally believed the state should regulate. The most important of such license taxes are those laid on the sale of liquor. The state of New York, which divides the proceeds from liquor licenses between

the state and the community, received $9,280,681.65 as its share of such revenue in the fiscal year 1913.

Inheritance Taxation. — Still another form of taxation to which increasing resort has been had in recent years is that of inheritances, collateral and direct. In the levying of inheritance taxes, or "succession duties," there are many and wide differences of detail which we cannot stop to consider. In many cases such taxes are progressive or graduated on a twofold basis, according to remoteness of relationship and according to size of bequest. Thus, a small bequest to a wife or son or daughter would be taxed at the lowest rate, while the bequest of a large fortune to distant relatives or strangers in blood would bear the heaviest burden. This form of taxation is winning increasing favor from economists and from statesmen, both on account of its conformity to the "faculty" theory of taxation, and because of its practical ease and certainty of collection. The large part which the tax already plays in the finances of New York State is shown in the table. Thirty-nine commonwealths raise a part of their revenue from a tax on collateral inheritance, and of these states twenty-eight also tax direct inheritance. It is to be noted further that a majority of the states have adopted the principle of progression in levying the tax.

III. Local Revenues

Local areas of administration in the United States have usually relied in the main upon the same taxes which are levied by the state governments. Thus, as has been explained above, the general property tax is levied at a rate which represents the contribution of the taxed property to town, county, and state governments. Similarly, the local governments are usually allowed a share of the revenue from

liquor-license taxation. Municipalities also at times have their independent license system for hucksters, etc., though this system usually has for its main purpose the regulation of such business.

Revenue from Franchises. — One form of revenue which American cities have been too prone to neglect is now receiving increasing attention. Private municipal service corporations enjoy very valuable privileges under their municipal franchises, and they should be made to pay for these franchises all that they are worth; that is, the capitalization of their earning power, less the actual capital invested with an extra allowance for the regular risks of the business. Some cities have been able to manage such municipal enterprises for themselves with great profit, and it is not improbable that this method will be adopted more generally as American municipalities become more honest and businesslike.

Receipts and Balances	All Cities
Classified by source, as receipts from:	
General property taxes	$570,830,861
Special property taxes	12,598,628
Poll and occupation taxes	1,792,358
Business taxes	52,348,721
Non-business license taxes	4,402,375
Special assessments	79,890,321
Fines, forfeits and escheats	4,449,361
Subventions and grants	36,141,199
Donations, gifts, and pension assessments	3,753,720
Earnings of general departments	22,547,201
Highway privileges	15,069,314
Rents of investment properties	11,286,954
Interest	28,715,919
Earnings of public service enterprises	96,558,379
Water supply systems	77,465,508
All other	19,092,871
Total receipts, including non-revenue receipts and cash balances	$2,381,103,700

Receipts and Balances	All Cities

The *per capita* receipts for the same year were as follows:

All revenues	$30.17
Property taxes	18.72
Other taxes	1.88
Special assessments	2.56
Fines, forfeits and escheats	0.14
Subventions, grants, donations, gifts, and pension assessments	1.28
Earnings of general departments	0.72
Highway privileges, rents, and interest	1.77
Earnings of public service enterprises	3.10

The preceding table prepared from "The Financial Statistics of Cities having a Population of over 30,000: 1915," published by the Department of Commerce, shows the sources from which American cities of 30,000 inhabitants or over derived their revenues in 1915.

IV. A Balanced Revenue System

In what has gone before, we have not dwelt upon the question whether any forms of revenue are particularly appropriate to different divisions of our government, or whether there is any gain in a balanced system for the different governments considered together. A moment's reflection should convince the student that no part of our revenue laws can be finally judged until it is considered in its relation to the whole system. To emphasize this fact, it may be well to suggest here a balanced revenue system, in which Federal, state, and local revenues will be placed in the right relation one to another.

Federal Revenues. — In the first place, it is to be noted that the Federal Constitution itself prescribes the place of customs duties in the system. Again, excise taxation could not be practiced by the state governments, since any state

that should begin such a practice would promptly drive the taxed production into the jurisdiction of other commonwealths. Income taxation, now firmly established, is also preferably a source of Federal revenue. To these sources of Federal revenue may be added the taxes on transactions, though these should be rarely and sparingly levied; and perhaps a light taxation of interstate commerce, which would be a peculiarly appropriate source of Federal revenue, and might offer an opportunity for the regulation of interstate business. It is to be hoped that in coming years income taxation will play relatively a larger part, and customs and excises a smaller part in our Federal system.

State Taxation. — We have already pointed out the manifold inequities of the general property tax. There is no longer any question that it would be well for our commonwealths to abandon as rapidly as possible this source of revenue, and also to leave to the local governments the taxation of real property. The state can easily develop corporation, franchise, and inheritance taxation until they will prove sufficient for state needs. Already several commonwealths have made the change, and many others seem prepared to follow them. Under these forms of taxation, personal property will be taxed more certainly and more equitably than it has anywhere been taxed under the general property tax.

There are those also who would tax incomes for state purposes. In many states this state income tax has been so dismal a failure that the possibility of success has been generally denied, but in recent years Wisconsin has met with a considerable degree of success in levying a state income tax and it is probable that other states in the future will achieve at least an equal success. Many difficulties involved in state taxation of incomes are not encountered in Federal

taxation, and it seems more advantageous, therefore, to leave incomes for Federal taxation, and to reserve inheritance taxation for the states.

Local Taxation. — The system thus far outlined would leave to the local governments the most convenient and most appropriate sources for their revenues. First of all, the greater part of local expenditure could be cared for by a tax on land, with perhaps a distinct tax on houses and on forms of personal property that cannot easily evade the assessor, such as luxurious consumer's goods. Any remaining need of revenue could be met by taxes on municipal franchises or by receipts from municipal ownership and management of public service enterprises.

Such a harmonious system as has been here suggested would insure a greater degree of equity, elasticity, economy, certainty, and harmony than now obtains in our unsystematic hit-and-miss forms of taxation.

SUMMARY

1. The revenues of the Federal government are derived in great part from customs duties, excise taxes, and the income tax.
2. Customs duties are regressive, inelastic, and uncertain, and disturb business; but their productiveness gives them a strong place in the financial system.
3. Excise taxes on liquor and tobacco are also regressive, but they are less objectionable in other respects, and they are conveniently collected.
4. The income tax promises to be a very desirable part of the Federal revenue system.
5. States have relied in the past mainly on the general property tax, which is unwieldy, unscientific, and inequitable, and leads to many sorts of corruption.
6. Poll taxes no longer play any considerable rôle in taxation.
7. Taxes on corporations, license taxes, and inheritance taxes are in many states taking the place of other forms of taxation.
8. Local governments now rely mainly on the general property tax and license taxation.

9. A balanced revenue system would have the Federal government supported chiefly by taxation of incomes and by customs and excise taxes; the state government, by corporation, franchise, and inheritance taxes; the local government by a tax on land, supplemented by separate taxes on houses, etc., and by franchise taxes or by revenues from municipal operation of public services.

QUESTIONS FOR RECITATION

1. What part of the Federal revenues comes from customs duties? From excise taxes?
2. What are specific duties? *Ad valorem* duties?
3. State and explain the objections to customs duties; to excise taxes. Compare the two.
4. Describe the method of collecting excise taxes.
5. Discuss the advantages of income taxation.
6. Describe the main features of the Federal income tax.
7. What is the objection to taxing transactions?
8. Describe the evils of the general property tax. How is the general property tax levied?
9. What has caused the recent great development of corporation taxation?
10. What are the advantages of inheritance taxation?
11. Frame a balanced system of taxation for town, state, and nation, and explain why each tax is placed where it is.

QUESTIONS FOR STUDY AND DISCUSSION

1. Is the general property tax a chief source of revenue in your state? Does your state constitution make it difficult or impossible to give up this form of taxation?
2. Does a mortgage on land represent wealth distinct from the value of the mortgaged land?
3. Who bears the tax laid on houses? On the rent of land?
4. Study carefully the financial reports of your own state and community.
5. Study the geographical distribution of the incomes reported for the Federal Income Tax.
6. Is there a poll tax in your state? Is it generally collected? How is it regarded?

LITERATURE

Adams, H. C.: *The Science of Finance*, Pt. II, Bk. II, Ch. VI, especially § 73.
Bastable, C. F.: *Public Finance.*
Daniels, W. M.: *The Elements of Public Finance*, pp. 167–170 and pp. 186–191.
Plehn, C. C.: *Introduction to Public Finance*, Pt. II, Ch. VIII, § 1. See also other references at close of preceding chapter.
Seligman, E. R. A.: *Income Taxation.*
Urdahl, T. K.: *The Fee System in the United States.*

NOTE ON FEDERAL INHERITANCE TAX

The law of September 8, 1916, discussed on pages 406–407, was amended by Act of March 3, 1917, and now the tax on the estates of decedents dying after March 3, 1917, is as follows, the net estate remaining unchanged: —

1½ % on first	$ 50,000
3 % " next	100,000
4½ % " "	100,000
6 % " "	200,000
7½ % " "	550,000
9 % " "	1,000,000
10½ % " "	1,000,000
12 % " "	1,000,000
13½ % " "	1,000,000
15 % on all amounts in excess of	$5,000,000

APPENDIX I

SUBJECTS FOR ESSAYS, DISCUSSIONS, AND DEBATES

The following list is intended simply to be suggestive. Students are advised first of all to choose such subjects for study as are best suited to the local environment. Thus, if the student lives in a rural district, let him first study local land values, agricultural rent, farming methods and their changes, mortgage indebtedness, the size of farms, the business character of farmers, the use of machinery, transportation of produce, farmers' organizations, etc., all with reference to his own neighborhood. If he lives in a manufacturing town, let him study in the same way the factory problem, — the extent to which women and children are employed, wages and hours of labor, means of preventing or adjusting clashes between employers and employed, etc.; or let him investigate the local railway problem, — freight rates, safety precautions, accidents, etc.

It hardly needs to be said that in selecting subjects for debate from the following list, care should be exercised to choose only such topics as offer a real affirmative and negative, and to frame the question in such a way as to have the two sides well balanced.

BIOGRAPHICAL AND PERSONAL

(Especially for Essays)

Sketch of the Life of Adam Smith.
The Life Work of Robert Owen.
Benjamin Franklin as a Practical Economist.
Arnold Toynbee.
Karl Marx and his Theories.
Henry George and the Single Tax.

LABOR AND LABOR ORGANIZATIONS

Economic Causes of the Rise and Fall of Slavery in the United States.
Economic Bearings of Free Land in the United States.
Indentured Servitude in the American Colonies.
The Sweating System in our Great Cities.
The Value and Cost of Child Labor.
Convict Labor.
The Economy of High Wages.
Sunday Labor.
The History and Prospects of Profit-sharing.
Voluntary Coöperation in the United States.
Workingmen's Budgets.
Old Age Pensions.
Labor Organizations in the United States.
Compulsory Incorporation of Trade-unions.
The American Federation of Labor.
Compulsory Arbitration in New Zealand.
National Health Insurance in Great Britain.
Industrial Education and Vocational Guidance.
Workmen's Compensation and Industrial Safety in the United States.
Minimum Wage Legislation in the United States and Great Britain.
Systems of Industrial Conciliation.

Immigration into the United States and the Proposed Literacy Test.
Methods for Dealing with Unemployment.
Strikes and Lockouts.
The National Consumers' League.
Trade-union Labels.
The National Civic Federation.
Chinese Labor and the American Standard of Life.
The Power of Consumers over Conditions of Employment.
Combinations of Employers and Employees against the Public.
Government by Injunction.

LAND AND FOOD SUPPLY

Agricultural Rents in England during the Nineteenth Century.
Tenant Farming in Texas.
Extensive and Intensive Farming in the United States.
The Relation between Small Farms and Democracy.
Forest Culture in New York State.
What Has Been Done with our Public Domain?
The Possibilities of Irrigation in our Arid States.
How Great Cities are Fed.

MONEY, BANKS, AND BANKING

Money in Various Climes and Times.
The Demonetization of Silver in the United States.
National and International Bimetallism.
Fiat Money in an Ideal State.
The English and American Banking Systems.
Our National Banking System.
Postal Savings Banks.
A Visit to the New York Clearing-house.
Credit in Modern Industry.
Usury and Usury Laws.
The Proposed Branch Banking System in the United States.

The Federal Farm Loan Act, 1900.
Financial Panic of 1907.
Agricultural Credit.
The Federal Reserve Board and its Powers.
Assets Currency.

COMMERCE, MONOPOLIES, ETC.

The Advance and Decline of American Shipping.
Ship Subsidies.
The Stock Market and its Relation to Industry.
The Use and Abuse of Speculation.
The So-called "Money Trust."
Economic Crises.
Monopolies, Old and New.
Trusts, What They Are and What They Do.
Municipal Lighting.
The Social Economy and Waste of Advertising.
The Federal Trade Commission and its Powers.

TRANSPORTATION

The Farmer's Interest in Good Roads.
The Prussian Railway System.
Railway Combinations in the United States.
The Interstate Commerce Commission and its Powers.
River and Harbor Bills.
How Railway Rates Should Be Determined.
The Physical Valuation of Railways.
Public *vs.* Private Ownership of Public Utilities.
The Effects of the Panama Canal.

SOCIAL PROBLEMS

The Influence of Luxury upon Rich and Poor.
How a Day-laborer with a Family of Five Exists in the Student's Community.

Tenement-house Life in Large Cities.
Working-girls' Clubs.
The Economic and Moral Causes of Poverty.
The Charity that Pauperizes.
Immigration and Social Standards.
Child Labor.

TAXATION AND THE TARIFF

Adam Smith on Taxation.
Taxes that Can Be Shifted.
Taxation and Perjury.
The Internal Revenue System.
The English Corn Laws.
The Protective Tariff on Sugar.
The Taxation of Inheritances.
Reciprocity and Reciprocity Treaties.
The Wisconsin Tax Commission and its Powers.
The Federal Income Tax.
Should the Tariff be Based on the Difference in Labor Cost Here and Abroad?
Does the Protective Tariff Benefit American Labor?
John Stuart Mill on the Taxation of Land Values.

THE STATE IN INDUSTRY

Four Views of the Economic Functions of Government: Anarchism, Extreme Individualism, Moderate Individualism, Socialism.
The Relation of the State to Industry in the United States.
Fiscal Monopolies in France.
The South Carolina Dispensary Law.
The Telegraph in England and America.
National Workshops in France in 1848.
Ideal Commonwealths.
Christian Socialism.
The Fabian Socialists.

Socialistic Experiments in the United States.
The Social Democratic Party in Germany.
Are We Tending toward Socialism?
Socialism or Social Reform, Which Shall It Be?
Excess Condemnation.
Socialism *vs.* Imperialism.
The Brotherhood of Labor.
Liberty of the Press in the Socialistic State.
Syndicalism and the Industrial Workers of the World.

GENERAL THEORY

The Theory of Value in Marshall and Böhm-Bawerk.
The Malthusian Theory of Population.
The Theory of a Wage-fund.
The "Lump of Labor" Theory, or the Theory of a Work-fund.
Money and the Balance of Trade: An Exploded Theory.
A Study of Human Wants.
Possible Substitutes for Competition.
Interesting Cases of Conjunctural Gains.
What are Economic Laws?
The Influence of Climate upon Civilization.
The Quantity Theory of the Value of Money.

MISCELLANEOUS

The Economic Results of the Great Plague of 1348.
The Irish Famine of 1848.
What Bad Cooking Is, and What It Costs.
What Our Community Has to Pay for Intoxicants.
The Economic Functions of the Church.
Changes of Fashion in Women's Clothing.
A Study in Division of Labor. (To be drawn from the student's observation.)
Our National Ash-heap. (The cost to the nation of inflammable construction of building.)

An Expensive Luxury. (A careful statistical study of the cost of tobacco to individuals and nations.)

The Cost of War. (A comparative study of the items in various national budgets that are due to wars past or to preparation for future wars.)

APPENDIX II

COURSES OF READING

It is believed that both students and teachers may derive valuable aid from the following selected bibliographies. The first group in each case includes works of a relatively untechnical character, and therefore constitutes a sort of elementary, "minimum" course of special study of the particular topic. The books mentioned in the second group are in each case more advanced and technical, and may therefore be used either for advanced courses of study or as works of reference. The authors would suggest that a school desiring to form a standard working library in Economics would do well to purchase the books mentioned in the second groups in the order in which they are named.

GENERAL ECONOMICS

Group 1

Bullock, C. J.: *An Introduction to the Study of Economics.*
Devine, E. T.: *Economics.*
Gide, Charles: *Principles of Political Economy.*
Seager, Henry R.: *Introduction to Economics.*
Taussig, F. W.: *Principles of Economics,* 2 vols.
Walker, F. A.: *Elementary Course in Political Economy;* also *Briefer Course in Political Economy.*

Group 2

Smith, Adam: *Wealth of Nations* (Cannan Edition).
Marshall, A.: *Principles of Economics.*
Smart, W.: *Introduction to the Theory of Value.*
Ely, R. T.: *Property and Contract in their Relations to the Distribution of Wealth.*
Clark, J. B.: *The Distribution of Wealth.*
Mill, J. S.: *The Principles of Political Economy.* (Ashley Edition.)
Ricardo, D.: *Principles of Political Economy and Taxation.* (Gonner Edition.) (Six chapters in Ashley's Economic Classics.)
Walker, F. A.: *Political Economy.* (Advanced Course.)
Patten, S. N.: *The Premises of Political Economy.*
Hobson, J. A.: *The Economics of Distribution.*
Commons, J. R.: *The Distribution of Wealth.*

ECONOMIC HISTORY

Group 1

Ashley, W. J.: *Introduction to English Economic History and Theory.* 2 vols.
Cheyney, E. P.: *Industrial and Social History of England.*
Beard, C.: *The Industrial Revolution.*
Ely, R. T.: *Evolution of Industrial Society.*
Coman, Katharine: *The Industrial History of the United States.*
Hewins, W. A. S.: *English Trade and Finance.*
Price, L. L.: *History of English Commerce and Industry.*
Warner, T.: *Landmarks of English Industrial History.*

Group 2

Bücher, Carl: *Industrial Evolution.* (Translation.)
Hobson, J. A.: *The Evolution of Modern Capitalism.*
Toynbee, Arnold: *The Industrial Revolution.*
Wright, C. D.: *Industrial Evolution of the United States.*

Johnson, E. R., et al.: *History of Domestic and Foreign Commerce of the United States.*
Rand, B.: *Selections illustrating Economic History since 1763.*
Gibbins, H. de B.: *Industry in England.*
Cunningham, W.: *Growth of English Industry and Commerce.* 3 vols.
A Documentary History of American Industrial Society. 10 vols.
Rogers, J. E. T.: *Six Centuries of Work and Wages* and *A History of Agriculture and Prices in England.*
Smart, W.: *Economic Annals of the Nineteenth Century.*
Ingram, J. K.: *History of Slavery.*

THE HISTORY OF POLITICAL ECONOMY

Group 1

Price, L. L.: *A Short History of Political Economy in England.*
Haney, L. H.: *History of Economic Thought.*

Group 2

Ingram, J. K.: *History of Political Economy.* (New Edition by Scott.)
Ashley, W. J. (editor): Economic Classics, including selected passages from Adam Smith's *Wealth of Nations;* six chapters of Ricardo's *Principles of Political Economy;* selected passages from Malthus's *Theory of Population;* Mun's *England's Treasure by Foreign Trade;* Jones's *Peasant Rents;* and Schmoller's *The Mercantile System.*
Gide, C., and Rist, C.: *A History of Economic Doctrines.* (Translation.)

RENT, LAND NATIONALIZATION, AND THE SINGLE TAX

Group 1

George, Henry: *Progress and Poverty.*
Walker, F. A.: *Land and its Rent.*
Fillebrown, C. B.: *The ABC of Taxation.*

Group 2

Commons, J. R.: *The Distribution of Wealth.*
Clark, J. B.: *The Distribution of Wealth.*
Hobson, J. A.: *The Economics of Distribution.*
Patten, S. N.: *Dynamic Economics.*
Smart, W.: *The Distribution of Income.*

MONEY, CREDIT, AND BANKING

Group 1

Bagehot, W.: *Lombard Street.*
Jevons, W. S.: *Money and the Mechanism of Exchange.*
Kinley, D.: *Money — A Study of the Theory of the Medium of Exchange.*
Scott, W. A.: *Money and Banking.*
Walker, F. A.: *Money, Trade, and Industry.*
White, Horace: *Money and Banking.*

Group 2

Reports of the National Monetary Commission.
Report of the Monetary Commission of the Indianapolis Convention.
Kemmerer, E. W.: *Money and Credit Instruments in their Relation to General Prices.*
Laughlin, J. L.: *The Principles of Money* and *The History of Bimetallism in the United States.*
Dunbar, C. F.: *Theory and History of Banking.*
Fisk, A. K.: *The Modern Bank.*
Cannon, J. G.: *Clearing Houses.*
Conant, C. A.: *History of Modern Banks of Issue.*
Sumner, W. G.: *History of American Currency.*
Walker, F. A.: *International Bimetallism.*
Willis, H. P.: *History of the Latin Monetary Union.*
Van Antwerp, W. C.: *The Stock Exchange from Within.*

Holdsworth, J. T.: *Money and Banking.*
Fisher, Irving: *The Purchasing Power of Money.*
Hepburn, A. B.: *The Contest for Sound Money.*

PUBLIC FINANCE

Group 1

Bullock, C. J.: *Selected Readings in Public Finance.*
Daniels, W. M.: *Elements of Public Finance.*
Lyon, W. H.: *Principles of Taxation.*
Plehn, C. C.: *Introduction to Public Finance.*

Group 2

Adams, H. C.: *The Science of Finance.*
Cohn, G.: *The Science of Finance.* (Translation.)
Bastable, C. F.: *Public Finance.*
Seligman, E. R. A.: *Essays in Taxation* and *The Income Tax.*
Dewey, D. R.: *Financial History of the United States.*
Noyes, A. D.: *Thirty Years of American Finance.*
Taussig, F. W.: *The Tariff History of the United States.*
West, Max: *The Inheritance Tax.*
Howe, F. C.: *Taxation and Taxes in the United States under the Internal Revenue System, 1791–1895.*

INTERNATIONAL TRADE AND PROTECTIONISM

Group 1

Bastable, C. F.: *Theory of International Trade.*
Bastiat, F.: *Sophisms of Protection.*
Clare, G.: *The ABC of the Foreign Exchanges.*
Taussig, F. W.: *Tariff History of the United States* and *Some Aspects of the Tariff Question.*

Group 2

Ashley, Percy: *Modern: Tariff History.*
Sumner, W. G.: *Protectionism.*
Patten, S. N.: *The Economic Basis of Protection.*
Wells, D. A.: *Practical Economics.*
List, F.: *National System of Political Economy.*
Carey, H. C.: *Harmony of Interests.*
Ashley, W. J.: *The Tariff Problem.*

SOCIALISM

Group 1

Brooks, J. G.: *The Social Unrest.*
Ely, R. T.: *Socialism and Social Reform.*
Howells, W. D.: *Letters from Altruria.*
Jaurès, J. L.: *Studies in Socialism.* (Translation.)
Morley, H. (editor): *Ideal Commonwealths.*
Reeves, W. P.: *State Experiments in Australia and New Zealand.*

Group 2

Bernstein, E.: *Evolutionary Socialism.* (Translation.)
Marx, Karl: *Capital.* (Translation.)
Rae, J.: *Contemporary Socialism.*
Schäffle, A. E. F.: *The Quintessence of Socialism.* (Translation.)
Sombart, W.: *Socialism and the Social Movement.* (Translation.)
Vandervelde, E.: *Collectivism.* (Translation.)
Walling, W. E.: *Progressivism and After* and also *Socialism of Today.*

LABOR: ITS POSITION, ITS CONDITIONS, AND ITS EARNINGS

Group 1

Bloomfield, M.: *Readings in Vocational Guidance.*
Carlton, F. T.: *The History and Problems of Organized Labor.*
Commons, J. R.: *Trade Unionism and Labor Problems.*
Gladden, W.: *Working People and their Employers.*
Mitchell, J.: *Organized Labor.*
Toynbee, Arnold: *The Industrial Revolution in England.*
Wright, C. D.: *Industrial Evolution of the United States.*

Group 2

Report of the United States Industrial Commission.
Report of the Federal Industrial Relations Commission.
Annual and Special Reports of the United States Labor Bureau.
Ely, R. T.: *Property and Contract in their Relation to the Distribution of Wealth.*
Hobson, J. A.: *The Evolution of Modern Capitalism.*
Schloss, D. F.: *Methods of Industrial Remuneration.*
The Pittsburgh Survey. 6 vols.
Jevons, W. S.: *The State in its Relation to Labor.*
Stimson, F. J.: *Handbook to the Labor Law of the United States.*
Webb, Sidney and Beatrice (Potter): *History of Trade-unionism* and *Industrial Democracy.*
A Documentary History of American Industrial Society.
Potter, Beatrice: *The Coöperative Movement in Great Britain.*
Levasseur, E.: *The American Workman.* (Translation.)
Gilman, N. P.: *Profit-sharing.*
Ashley, W. J.: *The Adjustment of Wages.*
Rogers, J. E. T.: *Six Centuries of Work and Wages.*
Brassey, T.: *Work and Wages.*
Ryan, J. A.: *A Living Wage.*

MONOPOLIES AND INDUSTRIAL COMBINATIONS

Group 1

Ely, R. T.: *Monopolies and Trusts.*
Jenks, J. W.: *The Trust Problem.*
Lloyd, Henry D.: *Wealth against Commonwealth.*
Von Halle, E.: *Trusts and Industrial Combinations.*
Meade, E. S.: *Trust Finance.*
Ripley, W. Z.: *Trusts, Pools and Corporations.*
Stevens, W. S.: *Industrial Combinations and Trusts.*

Group 2

Report of the United States Industrial Commission, Vols. I and II.
Adams, H. C.: *The Relation of the State to Industrial Action.*
Bemis, E. W.: *Municipal Monopolies.*
Clark, J. B.: *Theory of Economic Progress.*
Farrer, T. H.: *The State in its Relation to Trade.*
Cook, W. W.: *The Corporation Problem.*

TRANSPORTATION

Group 1

Hadley, A. T.: *Railroad Transportation.*
Johnson, E. R.: *American Railway Transportation.*
Ripley, W. Z.: *Railway Problems.*

Group 2

Reports (Annual) of the Interstate Commerce Commission.
Report of the United States Industrial Commission.
Reports of the Bureau of Corporations, now the Federal Trade Commission.
Meyer, B. H.: *Railway Legislation in the United States.*
Stickney, A. B.: *The Railway Problem.*

Dixon, F. H.: *State Railroad Control.*
Jeans, J. S.: *Waterways and Water Transport.*
Johnson, E. R.: *Inland Waterways.*
Johnson, E. R., and Huebner, G. G.: *Railroad Traffic and Rates.* 2 vols.
Lewis, G. H.: *National Consolidation of Railways.*
Newcomb, H. T.: *Railway Economics.*
Ripley, W. Z.: *Railroad Rates and Regulation.* 2 vols.

CORPORATIONS AND CORPORATION FINANCE

Group 1

Cleveland, F. A.: *Funds and their Uses.*
Lough, W. H.: *Corporation Finance.*
Meade, E. S.: *Trust Finance and Corporation Finance.*
Pratt, S. A.: *The Work of Wall Street.*

Group 2

Report of the Chicago Conference on Trusts.
Burdick, F. M.: *The Essentials of Business Law.*
Greene, T. L.: *Corporation Finance.*
Cook, W. W.: *The Corporation Problem.*
Emery, H. C.: *Speculation on the Stock and Produce Exchanges of the United States.*

COMMERCIAL GEOGRAPHY

Group 1

Adams, C. C.: *A Text-book of Commercial Geography.*
Gregory, H. E., et al.: *Physical and Commercial Geography.*
Redway, J. W.: *New Basis of Geography.*
Trotter, Spencer: *The Geography of Commerce.*
Smith, J. R.: *Industrial and Commercial Geography.*

GROUP 2

Reports of the Department of Commerce and Labor (U. S.), especially Commercial Relations of the United States; Commerce Reports; Monthly Summary of Commerce and Finance.
Thirteenth Census of the United States.
Chisholm, G. G.: *A Handbook of Commercial Geography.*
Keltie, J. S.: *Applied Geography.*

In addition to the books mentioned in the preceding paragraphs, students will find certain general works of reference of very great value. These may be listed most conveniently under the names dictionaries, periodicals, and general treatises. Every school that aspires to the possession of a working library in Economics should have a considerable number of the books in the following list, together with some of the magazines of most general use in the subject. In the first two groups the books and magazines respectively are given *in the order in which the authors would recommend their purchase.* For obvious reasons it has not been deemed best to do this in the case of the books mentioned in Group Three, which are therefore given in the alphabetical order of their authors. The student will not find in this book any references to German, French, or Italian authorities that have not been translated. Should he have occasion, in exceptional cases, to refer to such works, he should consult the bibliographies that are to be found in many of the general treatises included in our list.

DICTIONARIES

Dictionary of Political Economy. Edited by R. H. Inglis Palgrave.
Cyclopedia of Political Science and Political Economy. Edited by J. J. Lalor.
Cyclopedia of Social Reform. Edited by W. D. P. Bliss.

Cyclopedia of American Government. Edited by A. C. McLaughlin and A. B. Hart.

The standard encyclopedias will also be found to contain special articles on very many economic topics.

PERIODICALS

Publications of the American Economic Association and *the American Economic Review.*
The Quarterly Journal of Economics.
The Journal of Political Economy.
Political Science Quarterly.
The Yale Review.
Annals of the American Academy of Political and Social Science.
Municipal Affairs.
The Survey.
Commercial and Financial Chronicle.
Bradstreet's.
Dun's Review.
The Bankers' Magazine. (American.)

GENERAL TREATISES

Bullock, C. J.: *Introduction to the Study of Economics.*
Devine, E. T.: *Economics.*
Ely, R. T.: *Outlines of Economics;* new ed., rewritten by R. T. Ely, T. S. Adams, M. O. Lorenz, and A. A. Young.
Davenport, H. J.: *Elementary Economics.*
Fisher, I.: *Elementary Principles of Economics.*
Fetter, F. A.: *Principles of Economics.*
Gide, C.: *Principles of Political Economy.* (Translation.)
Hadley, A. T.: *Economics.*
Marshall, A.: *Principles of Economics;* also Marshall, A. and E.: *The Economics of Industry.*
Nicholson, J. S.: *Principles of Political Economy.*
Roscher, W.: *Political Economy.* (Translation.)

Seager, H. R.: *Introduction to Economics.*
Seligman, E. R. A.: *Principles of Economics.*
Sidgwick, H.: *Principles of Political Economy.*
Taussig, F. W.: *Principles of Economics.*
Walker, F. A.: *Political Economy.* (Advanced Course.)

INDEX

Abstinence theory of interest, 344–346.
Adulteration of goods, 85.
Agricultural stage, 33–36; culmination in feudalism, 40.
Agriculture in England in 1760, 51–56.
American Federation of Labor, 321.
Anarchism, 377.
Arbitration, industrial, 333; compulsory, 334–355.
Australia, industrial arbitration in, 333.
Austrian theory of interest, 346–350.

Balance of trade. *See* International trade.
Baltimore, ground rents, 297.
Banking, origin, 47–48; and credit, 244–259; checks and notes, 245–249; banks and clearing houses, 249–252; system of the United States, 252–256.
Barter, disadvantages, 38–39, 188, 225.
Bavaria, Saints' Days, 3.
Bequests, taxation, 412.
Bills of exchange, 248.
Bimetallism, defined, 236–237; Latin Monetary Union, 237; national and international, 238–239.
Bland-Allison Act, 240.
Böhm-Bawerk's theory of interest, 349.
Bonds, not capital, 129.
Bonus system, 330.
Book credit, 249.
Boycotts, 323.
Brassage, 230.
Brewery Workers of America, 321.
Business, public, 385.
Business. *See* Industry.

Cannibalism, causes, 29–31.
Capital, defined, 148; a factor of production, 148–153; capital goods, 149; functions, 149; origin, 150; formation, 151; results, 152; fixed and circulating, 152; free and specialized, 153; organization, 166, 169; increased by credit, 257–258; interest on, 364–365.
Census, estimates of wealth, 112–113; localization of industry, 167, 168.
Checks, 254–255.
Child Labor, laws, 70; Federal Act, 84–85, 287.
Christian Socialists, 379.
Cities, origin, 39.
Civilization, material, defined, 22.
Clearing houses, 256–257, 264
Climate, influence on land value, 298–299.
Coal, production revolutionized, 63.
Coins and coinage, 229–231; bimetallism, 236–238.
Collectivism, defined, 378.
Commerce, origin, 37–38. *See also* Industry.
Commissions, monopoly regulation, 218; United States Industrial Commission, 325; Federal Industrial Relations Commission, 325.
Communism, defined, 378.
Competition, beginnings, 46–47; growth, 77–82; regulation, 83–88; and price, 193; wastes, 373–374.

Conciliation, industrial, 333.
Conjunctural gains, 360.
Consumption, defined, 91; wealth, 95; productive, 95; relation to production, 96; economic order of, 104–106; Engel's law, 112; spending and saving, 116–124; luxurious, 120; harmful, 121; underconsumption, 130; and credit, 259; improvements, 305.
Contract, fundamental institution, 15–16.
Coöperation, 160; defined, 331; in England and Scotland, 332; productive and distributive, 332; strength and weakness, 333.
Copyrights, 14, 205.
Corporations, 159; taxes, 411.
Cotton industry, change in, 63.
Credit, economy stage, 21; origin, 47–48; and banking, 244–259; defined, 250–251; mechanism, 245–249; institutions, 249–252; in the United States, 252–256; Federal Farm Loan Act, 256–257; clearing houses, 257–258; advantages, 258–259; dangers, 259–260; public loans, 391.
Crises, explanation, 66–67, 132.
Cultivation, intensive and extensive margins, 303–306.
Currency Act of 1900, 240.
Customs taxes, 399–401.

Debts, 391. *See also* Loans.
Demand, 104–114; order of consumption, 104–106; law of substitution, indifference, or equimarginal return, 106; laws, 108–112; influence on price, 196–201; labor, 314–315; relation to supply, 343.
Differential character of rent, 309.
Diminishing returns, law of, 138–142, 304.
Diminishing utility, law of, 98–102.
Distribution, defined, 291–292; place in economics, 291–292; relation to factors of production, 293–294.
Division of labor, 162–166; advantages, 164; illustrated, 16–164; disadvantages, 165–166. *See also* Labor.
Division of occupation, 161.
Drafts, 247, 265–266, 268, 272.
Duties. *See* Protectionism.

Economic history, 21–88; stages, 22–26; industrial development, early stages, 28–40.
Economic legislation, in England before 1760, 59–60; changes in, 64–73.
Economic life, 2, 3; unit, 2–3.
Economic order of consumption, 104–106.
Economics, relation to social sciences, 1–2; defined, 2, 3; divisions, 5–7.
Economy, defined, 2.
Education, economic importance of, 325; public, 387.
Eminent domain, 11.
Employers' Associations, 324.
Engel, Law of Consumption, 112.
England, Industrial Revolution in, 51–73; consumption, 113; ground rents, 297; agricultural rents, 301; coöperation, 332; national expenditure, 385.
Entrepreneur, function, 157; single entrepreneur system, 159.
Equi-marginal return, law of, 106–107.
European War, finance, 385.
Evolution, nature of, 77.
Exchange, origin, 33, 178–181; machinery of, 180, 181; subjective exchange value, 185; objective exchange value, 186–188; money, the medium of, 225, 227; credit, 245.
Excise taxes, 401–402.
Expenditure, Engel's law of family, 112–114; public, 384–397; public finance defined, 384; magnitude, 385; growth, 386–387; classification, 387–389; objects of, in the United States, 389–390.

Exports and imports. *See* International trade.

Fabian Socialists, 379.
Factories, rise of, 45; factory acts, 70.
Factors of production, 136–153.
Faculty theory, 393.
Federal Farm Loan Act, 256–257.
Federal Industrial Relations Commission, 325.
Federal Reserve Act, 254.
Federal Reserve Banks, 254–256.
Fees, 392.
Feudalism, 40.
Finance, public, 384–416; defined, 384. *See also* Money.
Fines, definition, 12.
Fishing tribes, 29.
Food, consumption, 113, 114.
Foreign exchange, 262–277. *See also* International trade.
France, budget, 385.
Franchises, proper policy regarding, 86; not social capital, 152; revenue from, 413, 414.
Free coinage, 230.
Free lands, influence on rent, 302.
Free trade, 281–286.
Freedom. *See* Liberty.

George, Henry, 395.
Germany, insurance and old-age pensions, 336.
Giddings, F. H., on non-competing groups, 317.
Gilds, origin, 39–40, 46; organization, 320.
Gluts, cause of, 66; relation to crises, 132.
Gold, advantages for use as money, 231.
Goods, inspection in England, 68–69; in the United States, 85; and utilities, 91–96; defined, 91–92; free and economic, 92, 93; economic importance determined, 107; production of, 133; capital, 149; representative, 152; transfer, 178–181; absolutely scarce, 191; competitively produced, 193; relation of future goods to interest, 348. *See also* Value.
Government. *See* State.
Great Britain. *See* England.
Greenbacks, 252.
Ground rents, 297.

Handicraft stage, 23, 36–40.
History, value of, for economic study, 5–6, 21–22.
Housekeeping, economic importance of, 123; waste in, 124.
Hunting and fishing stage, 23, 28–29; tribes, 29, 31.

Illinois, consumption in, 113.
Immigration and population, 147, 148.
Imports. *See* International trade.
Inclosure, meaning, 55–56.
Income, social, 292; private, 292–293; of the American people, 405.
Income tax, federal, 403; operation, 404–405; experience, 406.
Increasing returns, 200.
Indifference, law of, 106, 107.
Industrial Commission, United States, 325.
Industrial development, early stages, 28–40.
Industrial Revolution in England, 51–73; results, 65–73; in the United States, 75–88.
Industrial stage, 43–49; in England, 51–73; in the United States, 75–88.
Industrial Workers of the World, 321; and syndicalism, 380.
Industry, concentration and integration, 78–81; regulation, 86–88, 216; localization, 167–168; organization of production, 169; state management, 215–221, 376–377; revenue from, 385.
Inheritance tax, 406–407, 412.
Injunctions, 323.

Inspection of factories, 335.
Insurance, compulsory, 335; sickness, 336; an element in gross interest, 352; in gross profits, 359.
Intensive cultivation, 303.
Interest, 339–355; how determined, 339–340; fallacious views, 340–343; theories, 343–350; rate, 352–354; usury, 354–355.
Internal revenue. *See* Revenue.
International banking. *See* International trade.
International payments, 262–267.
International trade, 262–288; nature of, 262–277; rate of exchange, 264–265; balance, 265–266; relation of war to, 270–272; value in, 275–277; advantages, 277; restrictions on, 277–288. *See also* Protectionism.
Inventions and the Industrial Revolution, 62–63.
Investments, 117; of labor and capital in land, 138–142, 302–306.
Iron, production in England, 58, 63.

Jevons, W. S., on monopolies, 219–220.

Knights of Labor, 321.

Labor, defined, 143; a factor in production, 143–148; causes of efficiency, 144; quantity, 144–148; organization, 160–166; simple association effort, 161; division of labor, 161–166; territorial division, 167, 168; and population, 169; intensive cultivation, 303–306; and wages, 312–336; supply of, 313; standard of living, 313; demand, 314; classification, 317; children, 335. *See also* Labor legislation and Labor organizations.
Labor legislation, purposes, 59–73, 65, 72, 83–85, 335.
Labor organizations, trade-unions, and the government, 71–72; defined, 319; origin, 320; three forms of, 321; growth, 321–322; strikes, 322; boycotts and injunctions, 323–324; Employers' Associations, 324; influence of the public, 324; benefits, 325–326; education, 325; standard of living, 326; weaknesses, 326–328; wage payment, 329–332; legislation, 335; insurance, 335.
Laissez-faire, 67–68.
Land, a factor in production, 136–137; three services of, 137; organization of labor, 167–168; relation to rent, 297; quality, 297–300; situation, 300–302; rent of agricultural land, 302–303; intensive cultivation, 303–306; rent of urban land, 306–307; value, 308; single tax, 394–397.
Large-scale production, 170–172; compared with small-scale, 171–173.
Latin Monetary Union, 237.
Legal tender, 227.
Legislation. *See under* Economic legislation, and Labor legislation.
Liberty, personal, 16–17; political, 40.
License taxes, 411.
Loan and trust companies, 251.
Loans, market, 350–352; interest on, 350–352; public, 391.
Lockouts, 322.
Luxury, 120, 121.

Malthusian theory of population, 144.
Management of industries by the state, 216.
Manufacture, changes in, 57–58, 62–63. *See also* Industrial Revolution.
Marginal expenses, graphs, 197–201.
Marginal return. *See* Marginal utility.
Marginal utility, law of diminishing, 98–102; relation to demand, 110; law of equi-marginal return, 140, 141.
Market value, 189–191.

Marriage and population, 145, 313.
Marx, Karl, scientific socialist, 379.
Massachusetts, labor legislation in, 83; consumption in, 113.
Metals. *See* Money.
Money, origin, 38–39, 225; law of diminishing utility, 101–102; 225–241; defined, 225; functions, 225–227; desirable qualities of metal, 227–229; coinage, 229–230; and governments, 230–231; value, 231; quantity theory, 232–233; cost of production, 233–234; prices, 234; paper, 234–236; Gresham's law, 236; bimetallism, 236–237; Latin Monetary Union, 237; silver, 237–238; fluctuations, 238–239; recent history, 239–241.
Monopolies, defined, 82, 203; natural, 82; regulation, 86–88; ownership, 88; monopoly value, 193, 203–221; classified, 204; social, 204; government, 205; natural, 206; laws of monopoly price, 207–213; second class of natural, 215; public ownership, 216–219; Jevons's criteria, 219, 220.
Mortality and population, 147.
Mortgages, not capital, 129, 152.

National Civic Federation, 325.
National Consumers' League, 324.
National debts. *See* Debts.
National defense, 388.
Nature, a factor in production, 137. *See also* Land.
"Natural agents," 137, 138.
Natural rights, 9.
Natural treasures, 374–375.
New York State, revenues, 407–408.
New Zealand, industrial arbitration, 334.
Notes, not capital, 152; defined, 235; instruments of credit, 246; promissory, 246.

Old-age pensions. *See* Pensions.
Organization, of production, 155–176; of the factors as a group, 155–160; of labor, 160–166; of capital, 166–167; of land, 167–168; conditions determining, 169–170; of exchange, 180, 181.
Over-production, general, impossible, 130–131.
Ownership, public, 216–219; increase and diffusion, 216; economy and efficiency, 216, 217; purification of politics, 217–218; will overthrow social monopolies, 218.

Paper money, 234–235; safety, 235–236.
Partnership, 159.
Pastoral stage, 23, 30–33.
Patents, 14–15, 205.
"Patrons of Husbandry," 87.
Pensions, 387, 388; old-age, 336.
Personal services, 92, 133.
Piecework, 329.
Politics, purification, 217–218.
Poll taxes, 408.
Population, Malthusian theory, 144; checks, 145, 146; growth, 145–148; and division of labor, 169.
Post office, a natural monopoly, 206, 215.
Poverty, 317.
Price, varies with demand, 110; defined, 189; how determined, 190; market and normal value, 190, 191; monopoly, 193; and competition, 193; laws of monopoly price, 207–213; and money, 231–234; relation to rent, 308.
Private enterprise, proper limits, 16, 376–377.
Private property. *See* Property.
Privileges, guaranteed, 14–15.
Production, 126–176; varieties, 127; definition, 128; over-production, 130; fluctuations, 132; and sacrifice, 132, 133; of goods and services, 133; factors, 136–153; land, 136–137; diminishing returns, 138–142; labor, 143; capital, 148–153; organization, 155–176; large-scale

and small-scale compared, 170–173; cost of production and value of money, 233–234; relation to consumption, 96; improvements, 305.
Productivity theory of interest, 343–344.
Profit sharing, 330.
Profits, 358–365; definition, 358; gross, 358–359, 361; pure, 358–359, 361–364; monopoly, 359–360, 363–364; capitalization, 364–365.
Progress and Poverty, 395.
Property, general tax on, 408–411.
Property, nature, 9; origin, 9–10; private, justification, 9–10; strengthening, 10; limitations, 10–13; public, meaning, 13–18; importance, 293–295.
Protection of labor, 327.
Protectionism, 277–288; objection to, 277–278; argument for, 278–281; argument against, 281–283; influence of tariffs, 283–285; relation to labor, 285–286. *See also* International trade.
Prussia, analysis of consumption in, 113.
Public expenditure. *See* Expenditure.
Public finance. *See* Finance.
Public loans. *See* Loans.
Public ownership, 216–219.
Public property. *See* Property.
Public revenue. *See* Revenue.
Public schools, 317.
Purchasing power, 108–109.

Quantity theory of money, 232–233.

Rent, 296–309; meaning, 297; ground rent, 297; quality of land, 297–300; situation of land, 300–302; agricultural, 302–306; urban, 306–307; relation to value, 307–308; defined, 309; and pure profit, 362.
Representative goods, 152.
Requisition, 11.
Returns, diminishing, proportionate and increasing, 138–142. *See also* Marginal expenses and Marginal utility.
Revenue Act, 403–406.
Revenue, public, 384–397; public finance defined, 384; classification, 390; public loans, 391; fees and special assessments, 392; taxes, 392–397; United States, 399–410; federal, 399–407; state, 407–412; local, 412–414; system, 414–416.
Revolution, nature, 77.
Ricardo, David, theory of rent, 309.
Rights, not natural, 8; fundamental, 8–18; human, 17.
Risk, relation to interest, 352; relation to profit, 359.
Russia, Saints' Days in, 3.

Saints' Days in Russia, 3; in Bavaria, 3.
Saving, and consumption, 116–119; by hoarding, 117; by investment, 117.
Savings banks, 250.
Saxony, consumption in, 113.
Scarcity, relation to value, 191, 193.
Scientific management, 330.
Scientific socialists, 379.
Scotland, coöperation in, 332.
Seigniorage, 230.
Services, personal, 92, 133.
Settlement, Law of, 59.
Sherman Act, repeal, 240.
Silver, as money, 231; bimetallism, 236–239; limitation of coinage, 237–238; legislation in the U. S., 240–241.
Silver Purchase Acts, 240.
Single tax, 394–397.
Slavery, origin, 34; disappearance, 40.
Sliding scale, 329.
Smith, Adam, use of term manufacturer, 57; on industrial freedom, 61; relations with Watt,

62; on labor laws, 65; views on protectionism, 279; on causes of differences in wages, 318.
Social sciences, 1.
Socialism, relation to distribution, 368–369; characteristics, 369–371; claim for distributive justice, 370–371; an extension of existing institutions, 371–372; strength, 372–374, 377; weakness, 375–377; classes, 378–380; in Europe, 380–381.
Socialist parties, 378–380.
Socialists, views on trusts, 175.
Special assessments, 392.
Specific and *ad valorem* duties, 400.
Spending, economy of, 119–124.
Standard of living, defined, 147; and population, 147, 313, 314; and labor organization, 326.
Standard, The, 395.
State, passive policy, 18; reaction against, 67–73; enterprises, 160; organization of production, 170; monopolies, 205; management of industry, 215–221; regulation, 216; economy and efficiency, 216–221; ownership, 217–220; coinage, 229; money, 230–231; labor commissions, 325; finance, 384–416; business, 385; activities, 387–389.
Steam engine, invention of, 62.
Stock companies, 159.
Strikes, 322.
Substitution, Law of, 106, 107.
Supply, labor, 144–148, 313; capital, 150; relation to value, 190–191; of money, 231–234; and demand, relation, 343.
Syndicalism, 380.

Tariff, discussion, 277–288.
Taxes, defined, 392; just, 393; faculty theory, 393; direct and indirect, 394; single tax, 394–397; customs, 399–401; excise, 401–402; transactions, 402–403; income, 403–406; inheritance, 406–407, 412; poll taxes, 408; property, 408–411; corporations, 411; license, 411; state and local, 415–416.
Telford, road improvement, 64.
Temperance and labor organizations, 325.
Trade, fluctuations in, 66–67. *See also* International trade.
Trademarks, 14–15, 205.
Trade-unions. *See* Labor organization.
Trade-union labels, 324.
Trades, origin, 37; and commerce, 37–38.
Transactions, taxes on, 402–403.
Transfer of goods. *See* Exchange.
Transportation, early, 48; progress, 58–59, 63–64.
Treasury notes, 241.
Trusts, relation of society to, 173–176.

Under-consumption, 130.
Unearned increment, 128, 396.
United Mine Workers, 321.
United States, economic history, 21–88; coinage, 237, 239; currency legislation, 240–241; banking system, 252–257; public expenditure, 386–387, 389; revenues, 392, 399–416.
United States Industrial Commission, 325.
Urban land, rent, 306–307; single tax, 394–397.
Usury interest, 354–355.
Utility, 91–96; defined, 91–92; varieties, 93–95; law of diminishing, 98–102; marginal, 98–102; varies with demand, 110; relation to value, 184.

Value, 183–201; defined, 183; subjective, 183; subjective use, 184; determined by marginal utility, 184; subjective exchange, 185; objective exchange, 186–188; and price, 188; market, 189–190;

normal, 190–191; and supply, 190–191; absolutely scarce goods, 191; monopoly, 193; competition, 193; demand, 194–201; monopoly, 203–221; frictional elements, 201; money the names of, 226; money the receptacle of, 227; high specific value of metals, 229; relation to rent, 307–309.

Wages, system, origin, 45–46; fixing, 60, 312–336; general, 312–316; relative, 316–318; methods of payment, 329–332.
War, expense of, 388.
Wastes, economic, 120.
Watt, James, invents steam engine, 62.
Wealth, individual and social, 129, 292; census estimates, 130.
Wealth of Nations, 57, 61, 62, 318.
West Shore Railway, lease of, to New York Central, 86.
Whitney, Eli, invents cotton gin, 63.
Women, protected by Factory Acts, 70; labor, 313.
Woolen industry, revolution in, 62–63.
Workmen's Compensation Acts, 335.

Printed in the United States of America.

THE following pages contain advertisements of a few of the Macmillan books on kindred subjects.

Property and Contract in Their Relation to the Distribution of Wealth

By RICHARD T. ELY, Ph.D., LL.D.

Of the University of Wisconsin; Author of "Outlines of Economics," Editor of "The Citizen's Library," etc.

Cloth, 8vo, 2 vols., $4.00
A special law library edition, sheep, $7.50

"We are indebted to Professor Ely for an excellent book. His style is clear and perspicuous, and his vocabulary for the most part untechnical. Economists ought to be able to understand his statement of the law, and lawyers his statement of economic theory. A study of the book ought to help bring together two classes who often have the same problems to deal with under different aspects, and often fail to understand each other. It would be an error, however, to give the impression that the book is essentially either a law book or a text book. It really deals in a philosophical way with the concepts of property and contract in their relation to the distribution of wealth. — Justice Francis J. Swayze, in the *Quarterly Journal of Economics*.

"Our economists, like our legal writers, have for the most part merely carried forward the English tradition with its powerful leaning towards extreme individualism. Professor Ely of the University of Wisconsin was one of the first among American writers upon economic subjects to draw his inspiration from continental sources. His early work in this field set forth ideas drawn from the teachings of distinguished modern German thinkers and writers, and in the present work he has fitted the facts of American economic life into the theories and conclusions of these masters." — *California Law Review*.

"I want to express my great pleasure and profit in reading 'Property and Contract.' This seems to me the strongest of all the author's many able contributions to economic thought. It should be read by all judges, for this book has marked the highroad along which courts must travel if they are to make the law a living science that shall meet the needs of our ever-changing civilization." — Judge E. Ray Stevens, Circuit Court, Madison, Wis.

"Professor Ely's work on 'Property and Contract' is much more than a timely book, it is a *timeless* book, in the sense that much of it will be as valuable fifty years hence as it is to-day. He has founded unshakably the social conception of property and demonstrated for all time the necessity of adjusting legal notions of property to altered circumstances brought about by economic and social development. The student of society rises from the book with the feeling that the reading of it has deepened his insight and made him a wiser counsellor of his fellow-men." — E. A. Ross.

THE MACMILLAN COMPANY

Publishers **64-66 Fifth Avenue** **New York**

BOSTON CHICAGO SAN FRANCISCO DALLAS LOS ANGELES

SOCIAL SCIENCE TEXT-BOOKS

EDITED BY RICHARD T. ELY

The New Government and Its Work

BY JAMES T. YOUNG

Professor of Public Administration in the
University of Pennsylvania

Cloth, 8vo, $2.25

This book, intended for that growing circle of readers who are interested not only in political form and structure, but also more especially in *what the government is doing and why*, is characterized by the following features:

1. It places greater emphasis than usual on fhe *work* of the government.

2. It pays more attention to present problems, especially to the *public regulation of business.*

3. It applies to every aspect of government the test of *results* — whether the subject be the powers of the President, the election laws, or the Sherman act — for the value of a court, a statute, or a political institution should be known by its output.

4. It depicts the *government as it is*, and as it has developed. Our system is not a finished crystal, nor an ancient historical manuscript, but a growth. And it is still growing.

5. It includes the interpretation of the Constitution and the chief regulative laws, in the most recent *decisions of the supreme court.* It is this that gives clear, definite meaning to the discussion of government forms and activities.

6. It presents an *ideal.* It does not hesitate to point out the moral defects, and the social cost of political weakness and inefficiency, but its *tone* is *optimistic.*

THE MACMILLAN COMPANY

Publishers **64-66 Fifth Avenue** **New York**

BOSTON CHICAGO SAN FRANCISCO DALLAS LOS ANGELES

Comparative Free Government

By JESSE MACY
Professor Emeritus of Political Science
AND
JOHN W. GANNAWAY
Professor of Political Science in Grinnell College

Cloth, 8vo, $2.25

The United States is made the basis for this study because it has been in fact the pioneer in securing world recognition for free government, and it is the originator of the Presidential type. The first part of "Comparative Free Government" is devoted to a somewhat detailed description of the organization and processes of government in the United States, together with a brief comparative study of selected South American republics. The second part is devoted chiefly to a study of the cabinet type. England is given first place as the originator of the system. The object of the book is to throw light upon the growth and perfection of free government in all states rather than to make a general comparison of governmental institutions. It is particularly adapted to use as a text in college courses.

Problems of Child Welfare

By GEORGE B. MANGOLD, Ph.D.
Director of the School of Social Economy of Washington University

Cloth, 8vo, $2.00

Although this book is designed especially for use as a text in college courses on philanthropy, it will also appeal to that growing class of men and women who in a systematic way are endeavoring to acquaint themselves with the various aspects of practical sociology. Much of the constructive philanthropy of to-day must deal directly with the child, the improvement of his conditions being the direct objective. Those problems which affect children in an indirect way, whether in the field of remedial or preventive philanthropy, are not treated. Under each separate problem are discussed the causes and conditions, the machinery of social betterment, and the plans and programme of improvement.

THE MACMILLAN COMPANY
Publishers **64-66 Fifth Avenue** **New York**
BOSTON **CHICAGO** **SAN FRANCISCO** **DALLAS** **LOS ANGELES**

CITIZEN'S LIBRARY OF ECONOMICS, POLITICS, AND SOCIOLOGY

EDITED BY R. T. ELY

Each volume, 12mo, $1.25

American City, The. A Problem in Democracy. By D. F. Wilcox.
Child Problems. By George B. Mangold.
Colonial Administration. By Paul S. Reinsch.
Colonial Government. By P. S. Reinsch.
Commission Government in American Cities. By Ernest S. Bradford.
Democracy and Social Ethics. By Jane Addams.
Education and Industrial Evolution. By Frank Tracy Carlton.
Elements of Sociology. By F. W. Blackmar.
Essays in the Monetary History of the United States. By C. J. Bullock.
Foundations of Sociology. By E. A. Ross.
Government in Switzerland. By John M. Vincent.
Great Cities in America: Their Problems and Their Government. By Delos F. Wilcox.
History of Political Parties in the United States. By J. Macy.
International Commercial Policies. By G. M. Fisk.
Introduction to Business Organization. By S. E. Sparling.
Introduction to the Study of Agricultural Economics. By H. C. Taylor.
Irrigation Institutions: A Discussion of the Growth of Irrigated Agriculture in the Arid West. By E. Mead.
Money: A Study of the Theory of the Medium of Exchange. By David Kinley.
Monopolies and Trusts. By R. T. Ely.
Municipal Engineering and Sanitation. By M. N. Baker.
Newer Ideals of Peace. By Jane Addams.
Principles of Anthropology and Sociology, The, in their Relations to Criminal Procedure. By M. Parmelee.
Railway Legislation in the United States. By B. H. Meyer.
Social Control: A Survey of the Foundation of Order. By E. A. Ross.
Some Ethical Gains Through Legislation. By Mrs. Florence Kelley.
Spirit of American Government, The. By J. A. Smith.
Studies in the Evolution of Industrial Society. By R. T. Ely.
Wage-Earning Women. By Annie M. MacLean.
World Politics. By P. S. Reinsch.

CITIZEN'S LIBRARY OF ECONOMICS, POLITICS, AND SOCIOLOGY

New Series

Ellwood, Charles. The Social Problem. *12mo, $1.25*
DeWitt, Benjamin P. The Progressive Movement. *12mo, $1.50*
King, Willford I. Wealth and Income of the People of the United States. *12mo, $1.50*

THE MACMILLAN COMPANY

Publishers **64-66 Fifth Avenue** **New York**